

New CVD Coated Grade for Steel Turning

82 Inserts  
Expansion

**UE6110**

**New insert grade provides outstanding durability.**



# New CVD Coated Grade for Steel Turning

# UE6110

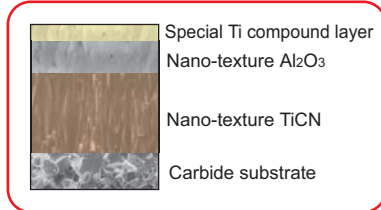
## Features

### Superior machining performance achieved using 2 in 1 technology

#### High Crater Wear Resistance

The gold Ti compound coating on the rake face exhibits exceptionally high crater wear resistance. This outer coating layer further enhances the crater wear resistance of the nano-texture  $Al_2O_3$ , making it suitable for high-speed, high performance machining.

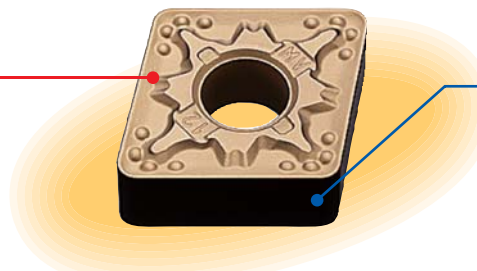
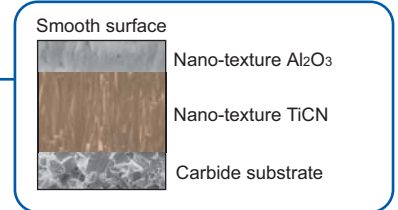
#### Coating structure of the rake face



#### High Flank Wear Resistance

The black coating on the flank face has an extremely smooth surface that prevents abnormal wear and weld chipping. Combined with the nano-texture coating improved surface finishes and stable tool life can be achieved.

#### Coating structure of the flank face



#### Crater Wear Comparison

Insert : CNMG120408-MA  
 Workpiece : JIS SNCM439  
 Cutting Conditions: Cutting speed 250m/min, Feed 0.3mm/rev, Depth of cut 1.5mm, Dry cutting, Cutting time 7min

With a Ti compound layer



Less crater wear

Without a Ti compound layer



Large crater wear

#### Flank Wear Comparison

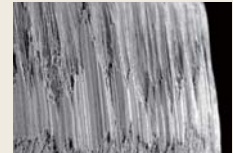
Insert : CNMG120408-  
 Workpiece : JIS SCr420H  
 Cutting Conditions: Cutting speed 200m/min, Feed 0.3mm/rev, Depth of cut 1.5mm, Dry cutting, Cutting time 2min

Smooth surface of **UE6110**



Smooth, stable wear

Competitor's



Rough, uneven wear

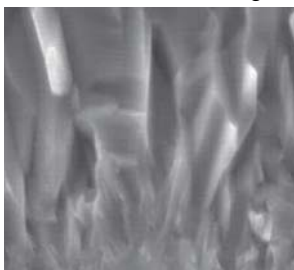
### State-of-the-art coating featuring 2 in 1 technology

#### 1 Newly developed "Nano-texture coating"

Mitsubishi Materials unique, new coating technology consisting of nano-texture TiCN and  $Al_2O_3$  offers a coating that has both high fracture and wear resistance.

#### Comparison of crystalline microstructure

Conventional coating



Nano-texture coating



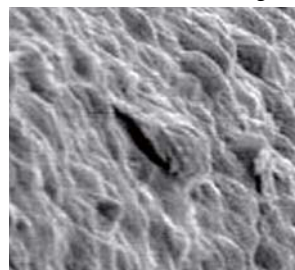
Even on a nano-level grains are finely refined

#### 2 Newly developed "Black super-even coating"

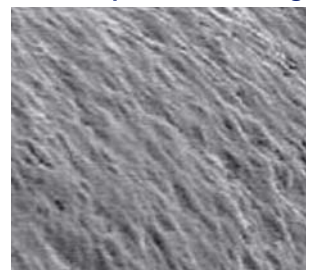
An extremely smooth coating surface inhibits wear propagation during machining to achieve a high quality surface finishes and prevents welding and chipping.

#### Comparison of coating surface

Conventional coating



Black super-even coating



2 in 1 technology for high fracture and wear resistance and stable cutting

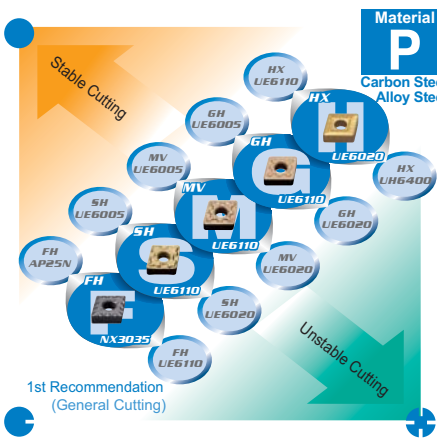
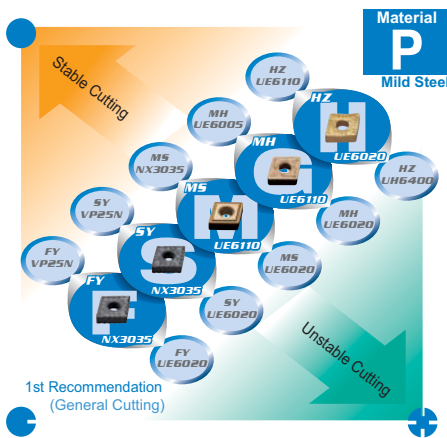
# Application Range and Recommended Cutting Conditions

● **UE6110** is the first recommendation for steel turning.

Suitable for turning various types of steels such as mild steel, carbon steel, bearing steel and lead free steel.

Application Range	
ISO	Steel
P01	UE6005
P10	UE6110 (NEW)
P20	UE6020
P30	UE6035
P40	UE6035

Recommended Cutting Conditions			
Work Material	Hardness	Cutting Mode	Recommended Cutting Speed (m/min)
Mild steel	≤ 180HB	General Cutting	300 (250–400)
Carbon steel Alloy steel	≥ 180HB	General Cutting	200 (150–300)



**Cutting Conditions**

- Stable Cutting: Continuous Cutting, Constant depth cutting, Pre-machined, Securely clamped component cutting
- General Cutting
- Unstable Cutting: Heavy interrupted cutting, Irregular depth cutting, Low clamping rigidity cutting

**Cutting Area**

- F Finish Cutting (ap≤0.5mm)
- S Light Cutting (ap=0.5–1.5mm)
- M Medium Cutting (ap=1.5–4.0mm)
- G Semi-heavy Cutting (ap=4.0–7.0mm)
- H Heavy Cutting (ap=7.0–10mm)

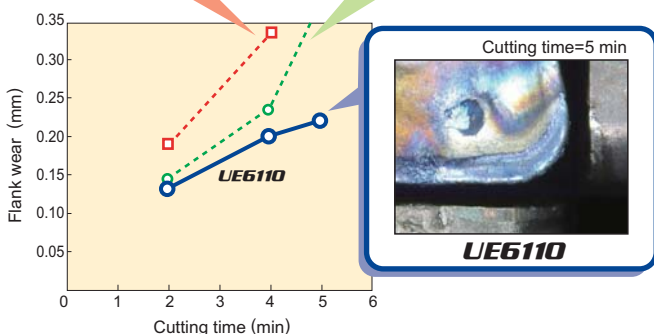
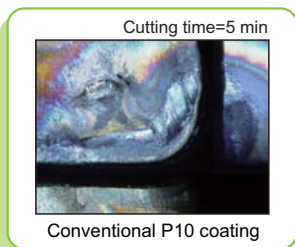
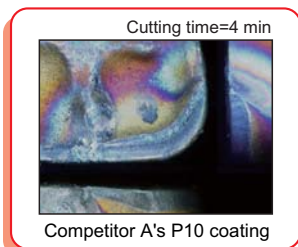
## Cutting Performance

### Wear Resistance

#### Continuous cutting of alloy steel

**UE6110** displays excellent wear resistance!

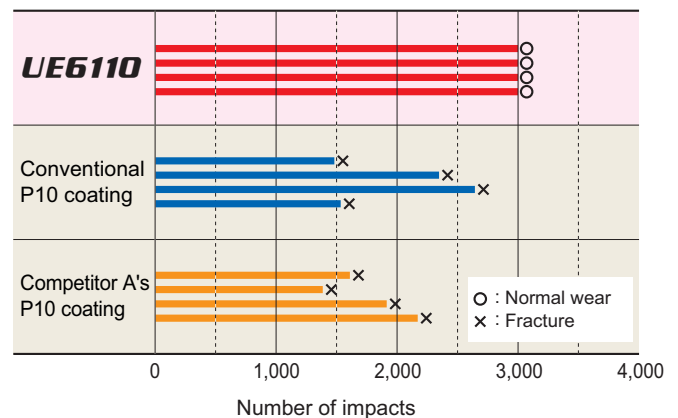
<Cutting Conditions>  
 Insert : CNMG120408-○○  
 Tool : PCLNL2525M12  
 Cutting speed: 250m/min  
 Feed : 0.3mm/rev  
 Depth of cut : 1.5mm  
 Coolant : Dry cutting  
 External continuous cutting  
 ○○ indicates types of general-purpose chipbreakers



### Fracture Resistance

#### Interrupted cutting of alloy steel

**UE6110** displays exceptional fracture and chipping resistance, providing a highly reliable cutting edge!




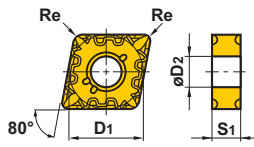

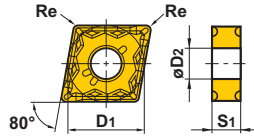

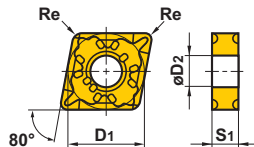

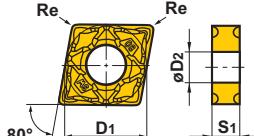

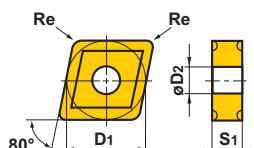
<Cutting Conditions>  
 Insert : CNMG120408-○○  
 Tool : PCLNR2525M12  
 Cutting speed: 200m/min  
 Feed : 0.25mm/rev  
 Depth of cut : 1.5mm  
 Coolant : Wet cutting  
 Interrupt cutting  
 ○○ indicates types of general-purpose chipbreakers.


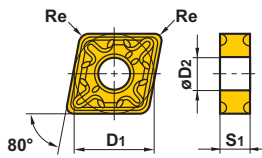

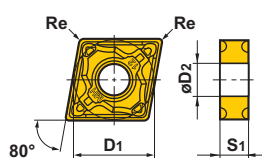

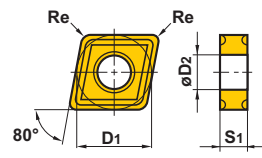

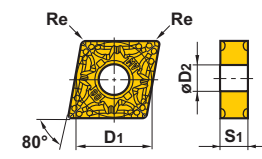

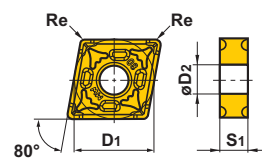

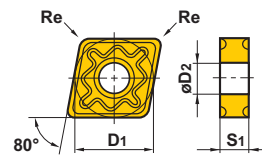


# UE6110

## Inserts

### ● Negative Inserts (With hole)


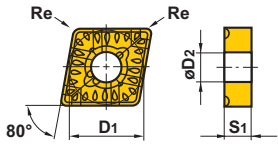

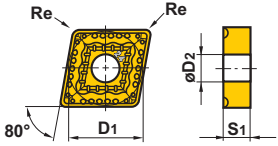

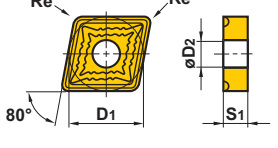

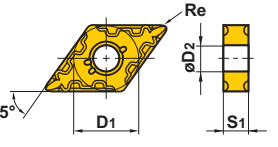

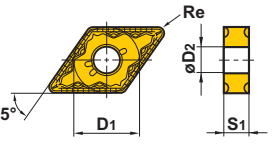

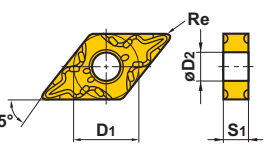

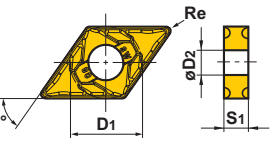
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6110	D1	S1	Re	D2	
FH Breaker 	CNMG120404-FH	●	12.7	4.76	0.4	5.16	
	120408-FH	●	12.7	4.76	0.8	5.16	
Finish Cutting							
SA Breaker 	CNMG120404-SA	●	12.7	4.76	0.4	5.16	
	120408-SA	●	12.7	4.76	0.8	5.16	
	120412-SA	●	12.7	4.76	1.2	5.16	
	160612-SA	●	15.875	6.35	1.2	6.35	
Light Cutting							
SH Breaker 	CNMG09T304-SH	●	9.525	3.97	0.4	3.81	
	09T308-SH	●	9.525	3.97	0.8	3.81	
	120404-SH	●	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							
SW Breaker 	CNMG120404-SW	●	12.7	4.76	0.4	5.16	
	120408-SW	●	12.7	4.76	0.8	5.16	
Light Cutting (Wiper)							
Standard Breaker 	CNMG090308	●	9.525	3.18	0.8	3.81	
	09T304	●	9.525	3.97	0.4	3.81	
	09T308	●	9.525	3.97	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	
	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	
Medium Cutting							

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>MA</b> Breaker    Medium Cutting	<b>CNMG120404-MA</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MA</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MA</b>	●	12.7	4.76	1.2	5.16	
	<b>120416-MA</b>	●	12.7	4.76	1.6	5.16	
	<b>160608-MA</b>	●	15.875	6.35	0.8	6.35	
	<b>160612-MA</b>	●	15.875	6.35	1.2	6.35	
	<b>160616-MA</b>	●	15.875	6.35	1.6	6.35	
	<b>190612-MA</b>	●	19.05	6.35	1.2	7.93	
<b>190616-MA</b>	●	19.05	6.35	1.6	7.93		
<b>MH</b> Breaker    Medium Cutting	<b>CNMG120404-MH</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MH</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MH</b>	●	12.7	4.76	1.2	5.16	
	<b>120416-MH</b>	●	12.7	4.76	1.6	5.16	
	<b>160608-MH</b>	●	15.875	6.35	0.8	6.35	
	<b>160612-MH</b>	●	15.875	6.35	1.2	6.35	
	<b>160616-MH</b>	●	15.875	6.35	1.6	6.35	
	<b>190612-MH</b>	●	19.05	6.35	1.2	7.93	
<b>190616-MH</b>	●	19.05	6.35	1.6	7.93		
<b>MS</b> Breaker    Medium Cutting	<b>CNMG090308-MS</b>	●	9.525	3.18	0.8	3.81	
	<b>09T308-MS</b>	●	9.525	3.97	0.8	3.81	
	<b>120404-MS</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MS</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MS</b>	●	12.7	4.76	1.2	5.16	
	<b>120416-MS</b>	●	12.7	4.76	1.6	5.16	
<b>MV</b> Breaker    Medium Cutting	<b>CNMG120404-MV</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MV</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MV</b>	●	12.7	4.76	1.2	5.16	
	<b>120416-MV</b>	●	12.7	4.76	1.6	5.16	
<b>MW</b> Breaker    Medium Cutting (Wiper)	<b>CNMG120408-MW</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MW</b>	●	12.7	4.76	1.2	5.16	
<b>GH</b> Breaker    Semi-Heavy Cutting	<b>CNMG120408-GH</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-GH</b>	●	12.7	4.76	1.2	5.16	
	<b>120416-GH</b>	●	12.7	4.76	1.6	5.16	
	<b>160612-GH</b>	●	15.875	6.35	1.2	6.35	
	<b>160616-GH</b>	●	15.875	6.35	1.6	6.35	
	<b>190612-GH</b>	●	19.05	6.35	1.2	7.93	
<b>190616-GH</b>	●	19.05	6.35	1.6	7.93		


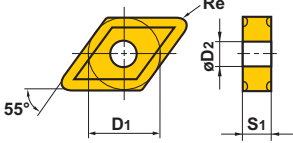

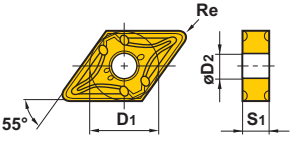

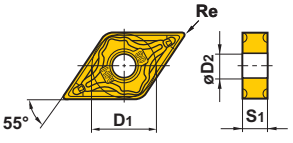

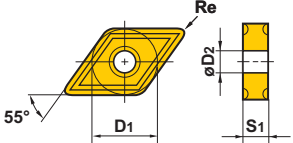

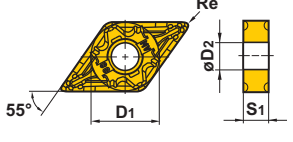
# UE6110

## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6110	D1	S1	Re	D2	
 HZ Breaker Heavy Cutting	<b>NEW</b> CNMM120408-HZ	●	12.7	4.76	0.8	5.16	
	<b>NEW</b> 120412-HZ	●	12.7	4.76	1.2	5.16	
	<b>NEW</b> 160612-HZ	●	15.875	6.35	1.2	6.35	
	<b>NEW</b> 160616-HZ	●	15.875	6.35	1.6	6.35	
	<b>NEW</b> 190612-HZ	●	19.05	6.35	1.2	7.93	
	<b>NEW</b> 190616-HZ	●	19.05	6.35	1.6	7.93	
	<b>NEW</b> 190624-HZ	□	19.05	6.35	2.4	7.93	
 HX Breaker Heavy Cutting	<b>NEW</b> CNMM160612-HX	□	15.875	6.35	1.2	6.35	
	<b>NEW</b> 160616-HX	□	15.875	6.35	1.6	6.35	
	<b>NEW</b> 190612-HX	●	19.05	6.35	1.2	7.93	
	<b>NEW</b> 190616-HX	●	19.05	6.35	1.6	7.93	
	<b>NEW</b> 190624-HX	●	19.05	6.35	2.4	7.93	
	<b>NEW</b> 250924-HX	●	25.4	9.52	2.4	9.12	
 HV Breaker Heavy Cutting	<b>NEW</b> CNMM190616-HV	●	19.05	6.35	1.6	7.93	
	<b>NEW</b> 190624-HV	●	19.05	6.35	2.4	7.93	
	<b>NEW</b> 250924-HV	●	25.4	9.52	2.4	9.12	
 FH Breaker Finish Cutting	DNMG150404-FH	●	12.7	4.76	0.4	5.16	
	150408-FH	●	12.7	4.76	0.8	5.16	
	150604-FH	●	12.7	6.35	0.4	5.16	
	150608-FH	●	12.7	6.35	0.8	5.16	
 SA Breaker Light Cutting	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	
	150612-SA	●	12.7	6.35	1.2	5.16	
 SH Breaker Light Cutting	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	
	150612-SH	●	12.7	6.35	1.2	5.16	
 SW Breaker Light Cutting (Wiper)	DNMX150404-SW	●	12.7	4.76	0.4	5.16	
	150408-SW	●	12.7	4.76	0.8	5.16	
	150604-SW	●	12.7	6.35	0.4	5.16	
	150608-SW	●	12.7	6.35	0.8	5.16	


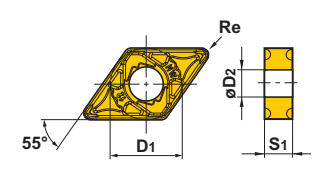

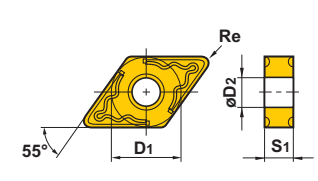

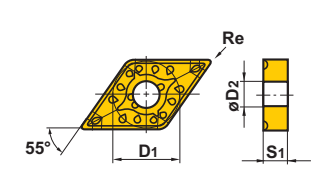

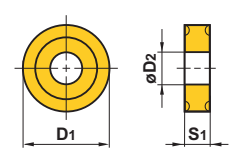

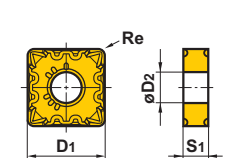

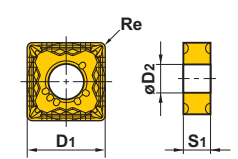

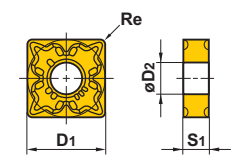
● : Inventory maintained. □ : Non stock, produced to order only.

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>Standard Breaker</b>    Medium Cutting	<b>DNMG110408</b>	●	9.525	4.76	0.8	3.81	
	<b>150404</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>150416</b>	●	12.7	4.76	1.6	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>150616</b>	●	12.7	6.35	1.6	5.16	
<b>MA Breaker</b>    Medium Cutting	<b>DNMG110404-MA</b>	●	9.525	4.76	0.4	3.81	
	<b>110408-MA</b>	●	9.525	4.76	0.8	3.81	
	<b>110412-MA</b>	●	9.525	4.76	1.2	3.81	
	<b>150404-MA</b>	●	12.7	4.76	0.4	5.16	
	<b>150408-MA</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-MA</b>	●	12.7	4.76	1.2	5.16	
	<b>150416-MA</b>	●	12.7	4.76	1.6	5.16	
	<b>150604-MA</b>	●	12.7	6.35	0.4	5.16	
	<b>150608-MA</b>	●	12.7	6.35	0.8	5.16	
<b>MH Breaker</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>MS Breaker</b>    Medium Cutting	<b>DNMG110408-MS</b>	●	9.525	4.76	0.8	3.81	
	<b>150404-MS</b>	●	12.7	4.76	0.4	5.16	
	<b>150408-MS</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-MS</b>	●	12.7	4.76	1.2	5.16	
	<b>150604-MS</b>	●	12.7	6.35	0.4	5.16	
	<b>150608-MS</b>	●	12.7	6.35	0.8	5.16	
<b>MV Breaker</b>    Medium Cutting	<b>DNMG150404-MV</b>	●	12.7	4.76	0.4	5.16	
	<b>150408-MV</b>	●	12.7	4.76	0.8	5.16	
	<b>150412-MV</b>	●	12.7	4.76	1.2	5.16	
	<b>150416-MV</b>	●	12.7	4.76	1.6	5.16	
	<b>150604-MV</b>	●	12.7	6.35	0.4	5.16	
	<b>150608-MV</b>	●	12.7	6.35	0.8	5.16	
	<b>150612-MV</b>	●	12.7	6.35	1.2	5.16	
<b>150616-MV</b>	●	12.7	6.35	1.6	5.16		


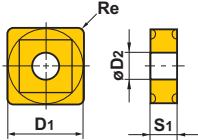

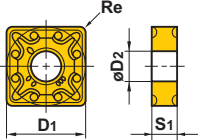

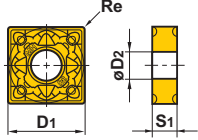

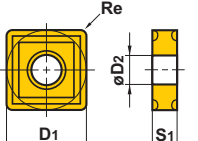

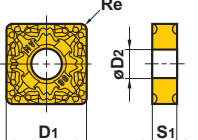

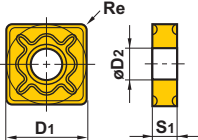
# UE6110

## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6110	D1	S1	Re	D2	
<b>MW</b> Breaker  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>GH</b> Breaker  Semi-Heavy 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>HZ</b> Breaker  Heavy Cutting	<b>NEW DNMM150408-HZ</b>	●	12.7	4.76	0.8	5.16	
	<b>NEW 150412-HZ</b>	●	12.7	4.76	1.2	5.16	
	<b>NEW 150416-HZ</b>	●	12.7	4.76	1.6	5.16	
	<b>NEW 150608-HZ</b>	●	12.7	6.35	0.8	5.16	
	<b>NEW 150612-HZ</b>	●	12.7	6.35	1.2	5.16	
	<b>NEW 150616-HZ</b>	●	12.7	6.35	1.6	5.16	
<b>Standard</b> Breaker  Medium Cutting	<b>RNMG090300</b>	●	9.525	3.18	—	3.81	
	<b>120400</b>	●	12.7	4.76	—	5.16	
	<b>150600</b>	●	15.875	6.35	—	6.35	
	<b>190600</b>	●	19.05	6.35	—	7.93	
	<b>NEW 250900</b>	●	25.4	9.52	—	9.12	
	<b>NEW 310900</b>	●	31.75	9.52	—	12.7	
<b>FH</b> Breaker  Finish Cutting	<b>SNMG120404-FH</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-FH</b>	●	12.7	4.76	0.8	5.16	
<b>SA</b> Breaker  Light Cutting	<b>SNMG120404-SA</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-SA</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-SA</b>	●	12.7	4.76	1.2	5.16	
<b>SH</b> Breaker  Light Cutting	<b>SNMG120404-SH</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-SH</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-SH</b>	●	12.7	4.76	1.2	5.16	


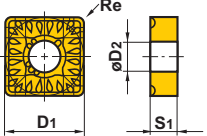

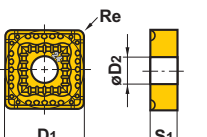

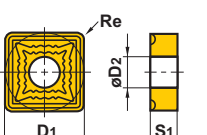

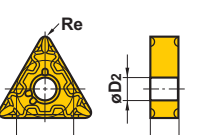

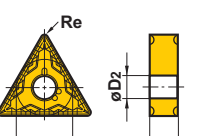

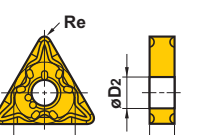



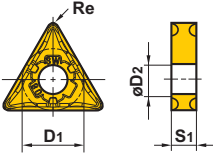

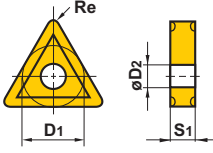


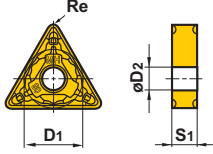

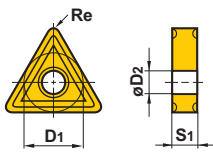

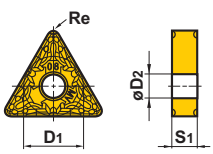
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>Standard Breaker</b>  	<b>SNMG090304</b>	●	9.525	3.18	0.4	3.81	
	<b>090308</b>	●	9.525	3.18	0.8	3.81	
	<b>120404</b>	●	12.7	4.76	0.4	5.16	
	<b>120408</b>	●	12.7	4.76	0.8	5.16	
	<b>120412</b>	●	12.7	4.76	1.2	5.16	
	<b>120416</b>	□	12.7	4.76	1.6	5.16	
	<b>150612</b>	□	15.875	6.35	1.2	6.35	
	<b>190612</b>	●	19.05	6.35	1.2	7.93	
	<b>190616</b>	●	19.05	6.35	1.6	7.93	
Medium Cutting							
<b>MA Breaker</b>  	<b>SNMG120404-MA</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MA</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MA</b>	●	12.7	4.76	1.2	5.16	
	<b>150608-MA</b>	●	15.875	6.35	0.8	6.35	
	<b>150612-MA</b>	●	15.875	6.35	1.2	6.35	
	<b>150616-MA</b>	●	15.875	6.35	1.6	6.35	
	<b>190612-MA</b>	●	19.05	6.35	1.2	7.93	
	<b>190616-MA</b>	●	19.05	6.35	1.6	7.93	
	Medium Cutting						
<b>MH Breaker</b>  	<b>SNMG120404-MH</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MH</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MH</b>	●	12.7	4.76	1.2	5.16	
	<b>190612-MH</b>	●	19.05	6.35	1.2	7.93	
	<b>190616-MH</b>	●	19.05	6.35	1.6	7.93	
Medium Cutting							
<b>MS Breaker</b>  	<b>SNMG120404-MS</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MS</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MS</b>	●	12.7	4.76	1.2	5.16	
Medium Cutting							
<b>MV Breaker</b>  	<b>SNMG120404-MV</b>	●	12.7	4.76	0.4	5.16	
	<b>120408-MV</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-MV</b>	●	12.7	4.76	1.2	5.16	
Medium Cutting							
<b>GH Breaker</b>  	<b>SNMG120408-GH</b>	●	12.7	4.76	0.8	5.16	
	<b>120412-GH</b>	●	12.7	4.76	1.2	5.16	
	<b>120416-GH</b>	●	12.7	4.76	1.6	5.16	
	<b>150612-GH</b>	●	15.875	6.35	1.2	6.35	
	<b>150616-GH</b>	●	15.875	6.35	1.6	6.35	
	<b>190612-GH</b>	●	19.05	6.35	1.2	7.93	
<b>190616-GH</b>	●	19.05	6.35	1.6	7.93		
Semi-Heavy Cutting							

# UE6110

## Inserts

### ● Negative Inserts (With hole)


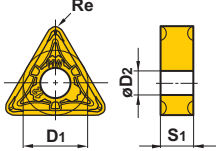

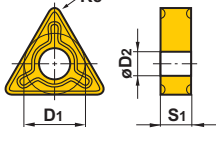

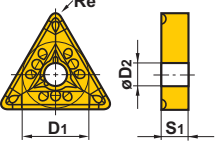

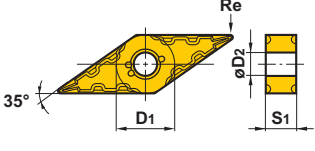

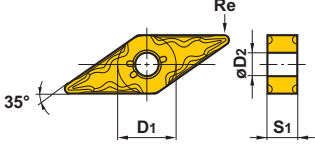

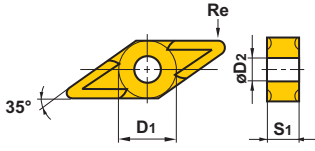
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6110	D1	S1	Re	D2	
<b>HZ</b> Breaker 	<b>NEW</b> SNMM120408-HZ	●	12.7	4.76	0.8	5.16	
	<b>NEW</b> 120412-HZ	●	12.7	4.76	1.2	5.16	
	<b>NEW</b> 150612-HZ	●	15.875	4.76	1.2	6.35	
	<b>NEW</b> 190612-HZ	●	19.05	6.35	1.2	7.93	
	<b>NEW</b> 190616-HZ	●	19.05	6.35	1.6	7.93	
	<b>NEW</b> 190624-HZ	□	19.05	6.35	2.4	7.93	
Heavy Cutting							
<b>HX</b> Breaker 	<b>NEW</b> SNMM150612-HX	□	15.875	6.35	1.2	6.35	
	<b>NEW</b> 150616-HX	□	15.875	6.35	1.6	6.35	
	<b>NEW</b> 190612-HX	●	19.05	6.35	1.2	7.93	
	<b>NEW</b> 190616-HX	●	19.05	6.35	1.6	7.93	
	<b>NEW</b> 190624-HX	●	19.05	6.35	2.4	7.93	
	<b>NEW</b> 250724-HX	●	25.4	7.94	2.4	9.12	
Heavy Cutting							
<b>HV</b> Breaker 	<b>NEW</b> SNMM190616-HV	●	19.05	6.35	1.6	7.93	
	<b>NEW</b> 190624-HV	●	19.05	6.35	2.4	7.93	
	<b>NEW</b> 250724-HV	●	25.4	7.94	2.4	9.12	
	<b>NEW</b> 250924-HV	●	25.4	9.53	2.4	9.12	
Heavy Cutting							
<b>FH</b> Breaker 	TNMG160404-FH	●	9.525	4.76	0.4	3.81	
	160408-FH	●	9.525	4.76	0.8	3.81	
Finish Cutting							
<b>SA</b> Breaker 	TNMG160404-SA	●	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	
	220412-SA	●	12.7	4.76	1.2	5.16	
Light Cutting							
<b>SH</b> Breaker 	TNMG160404-SH	●	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							


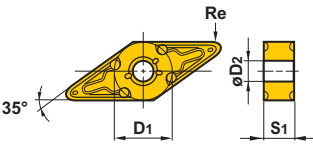

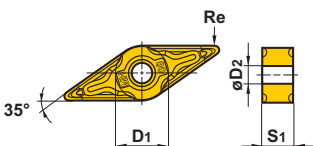

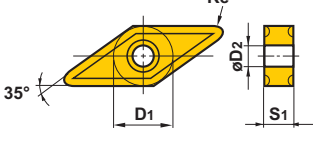

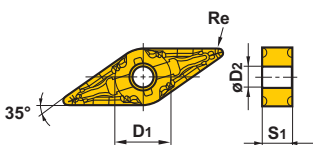

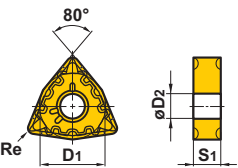

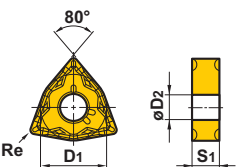

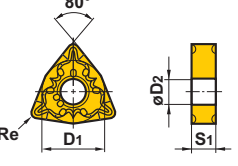
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>SW</b> Breaker   Light Cutting (Wiper)	<b>TNMX160404-SW</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-SW</b>	●	9.525	4.76	0.8	3.81	
<b>Standard</b> Breaker   Medium Cutting	<b>TNMG110304</b>	●	6.35	3.18	0.4	2.26	
	<b>110308</b>	●	6.35	3.18	0.8	2.26	
	<b>160304</b>	□	9.525	3.18	0.4	3.81	
	<b>160308</b>	□	9.525	3.18	0.8	3.81	
	<b>160404</b>	●	9.525	4.76	0.4	3.81	
	<b>160408</b>	●	9.525	4.76	0.8	3.81	
	<b>160412</b>	●	9.525	4.76	1.2	3.81	
	<b>160416</b>	□	9.525	4.76	1.6	3.81	
	<b>220404</b>	●	12.7	4.76	0.4	5.16	
	<b>220408</b>	●	12.7	4.76	0.8	5.16	
	<b>220412</b>	●	12.7	4.76	1.2	5.16	
	<b>220416</b>	●	12.7	4.76	1.6	5.16	
	<b>MA</b> Breaker   Medium Cutting	<b>TNMG160404-MA</b>	●	9.525	4.76	0.4	
<b>160408-MA</b>		●	9.525	4.76	0.8	3.81	
<b>160412-MA</b>		●	9.525	4.76	1.2	3.81	
<b>220408-MA</b>		●	12.7	4.76	0.8	5.16	
<b>220412-MA</b>		●	12.7	4.76	1.2	5.16	
<b>270608-MA</b>		●	15.875	6.35	0.8	6.35	
<b>MH</b> Breaker   Medium Cutting	<b>TNMG160404-MH</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MH</b>	●	9.525	4.76	0.8	3.81	
	<b>160412-MH</b>	●	9.525	4.76	1.2	3.81	
	<b>220408-MH</b>	●	12.7	4.76	0.8	5.16	
	<b>220412-MH</b>	●	12.7	4.76	1.2	5.16	
<b>MS</b> Breaker   Medium Cutting	<b>TNMG160404-MS</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MS</b>	●	9.525	4.76	0.8	3.81	
	<b>160412-MS</b>	●	9.525	4.76	1.2	3.81	
	<b>220408-MS</b>	●	12.7	4.76	0.8	5.16	
<b>MV</b> Breaker   Medium Cutting	<b>TNMG160404-MV</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MV</b>	●	9.525	4.76	0.8	3.81	
	<b>160412-MV</b>	●	9.525	4.76	1.2	3.81	
	<b>220408-MV</b>	●	12.7	4.76	0.8	5.16	
	<b>220412-MV</b>	●	12.7	4.76	1.2	5.16	

# UE6110

## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6110	D1	S1	Re	D2	
<b>MW</b> Breaker    Light Cutting (Wiper)	TNMX160408-MW	●	9.525	4.76	0.8	3.81	
	160412-MW	●	9.525	4.76	1.2	3.81	
<b>GH</b> Breaker    Semi-Heavy 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	
<b>HZ</b> Breaker    Heavy Cutting	<b>NEW</b> TNMM160408-HZ	●	9.525	4.76	0.8	3.81	
	<b>NEW</b> 220408-HZ	●	12.7	4.76	0.8	5.16	
	<b>NEW</b> 220412-HZ	●	12.7	4.76	1.2	5.16	
	<b>NEW</b> 220416-HZ	●	12.7	4.76	1.6	5.16	
<b>FH</b> Breaker    Finish Cutting	VNMG160404-FH	●	9.525	4.76	0.4	3.81	
	160408-FH	●	9.525	4.76	0.8	3.81	
<b>SH</b> Breaker    Light Cutting	VNMG160404-SH	●	9.525	4.76	0.4	3.81	
	160408-SH	●	9.525	4.76	0.8	3.81	
<b>Standard</b> Breaker    Medium Cutting	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	


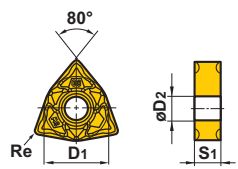

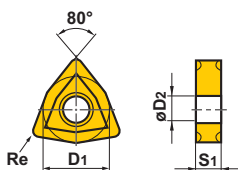

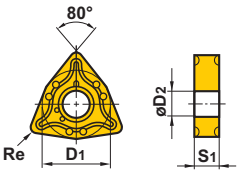

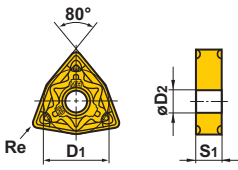

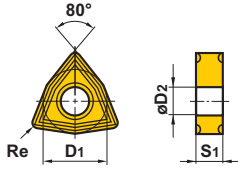

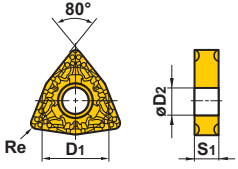
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>MA</b> Breaker  Medium Cutting	<b>VNMG160404-MA</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MA</b>	●	9.525	4.76	0.8	3.81	
<b>MH</b> Breaker  Medium Cutting	<b>VNMG160404-MH</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MH</b>	●	9.525	4.76	0.8	3.81	
<b>MS</b> Breaker  Medium Cutting	<b>VNMG160404-MS</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MS</b>	●	9.525	4.76	0.8	3.81	
<b>MV</b> Breaker  Medium Cutting	<b>VNMG160404-MV</b>	●	9.525	4.76	0.4	3.81	
	<b>160408-MV</b>	●	9.525	4.76	0.8	3.81	
<b>FH</b> Breaker  Finish Cutting	<b>WNMG080404-FH</b>	●	12.7	4.76	0.4	5.16	
	<b>080408-FH</b>	●	12.7	4.76	0.8	5.16	
<b>SA</b> Breaker  Light Cutting	<b>WNMG080404-SA</b>	●	12.7	4.76	0.4	5.16	
	<b>080408-SA</b>	●	12.7	4.76	0.8	5.16	
	<b>080412-SA</b>	●	12.7	4.76	1.2	5.16	
<b>SH</b> Breaker  Light Cutting	<b>WNMG06T304-SH</b>	●	9.525	3.97	0.4	3.81	
	<b>06T308-SH</b>	●	9.525	3.97	0.8	3.81	
	<b>06T312-SH</b>	●	9.525	3.97	1.2	3.81	
	<b>060404-SH</b>	●	9.525	4.76	0.4	3.81	
	<b>060408-SH</b>	●	9.525	4.76	0.8	3.81	
	<b>060412-SH</b>	●	9.525	4.76	1.2	3.81	
	<b>080404-SH</b>	●	12.7	4.76	0.4	5.16	
	<b>080408-SH</b>	●	12.7	4.76	0.8	5.16	
<b>080412-SH</b>	●	12.7	4.76	1.2	5.16		


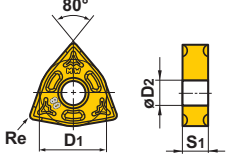

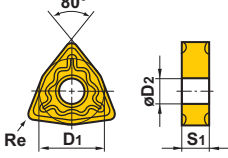


# UE6110


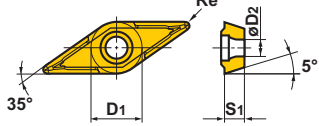
## Inserts

### ● Negative Inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
 SW Breaker  Light Cutting (Wiper)	WNUMG060404-SW	●	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	
 Standard Breaker  Medium Cutting	WNUMG080404	●	12.7	4.76	0.4	5.16	
	080408	●	12.7	4.76	0.8	5.16	
	080412	●	12.7	4.76	1.2	5.16	
 MA Breaker  Medium Cutting	WNUMG06T304-MA	●	9.525	3.97	0.4	3.81	
	06T308-MA	●	9.525	3.97	0.8	3.81	
	06T312-MA	●	9.525	3.97	1.2	3.81	
	060404-MA	●	9.525	4.76	0.4	3.81	
	060408-MA	●	9.525	4.76	0.8	3.81	
	060412-MA	●	9.525	4.76	1.2	3.81	
	080404-MA	●	12.7	4.76	0.4	5.16	
	080408-MA	●	12.7	4.76	0.8	5.16	
	080412-MA	●	12.7	4.76	1.2	5.16	
080416-MA	●	12.7	4.76	1.6	5.16		
 MH Breaker  Medium Cutting	WNUMG080404-MH	●	12.7	4.76	0.4	5.16	
	080408-MH	●	12.7	4.76	0.8	5.16	
	080412-MH	●	12.7	4.76	1.2	5.16	
 MS Breaker  Medium Cutting	WNUMG06T304-MS	●	9.525	3.97	0.4	3.81	
	06T308-MS	●	9.525	3.97	0.8	3.81	
	060404-MS	●	9.525	4.76	0.4	3.81	
	060408-MS	●	9.525	4.76	0.8	3.81	
	080404-MS	●	12.7	4.76	0.4	5.16	
	080408-MS	●	12.7	4.76	0.8	5.16	
080412-MS	●	12.7	4.76	1.2	5.16		
 MV Breaker  Medium Cutting	WNUMG06T304-MV	●	9.525	3.97	0.4	3.81	
	06T308-MV	●	9.525	3.97	0.8	3.81	
	06T312-MV	●	9.525	3.97	1.2	3.81	
	060404-MV	●	9.525	4.76	0.4	3.81	
	060408-MV	●	9.525	4.76	0.8	3.81	
	060412-MV	●	9.525	4.76	1.2	3.81	
	080404-MV	●	12.7	4.76	0.4	5.16	
	080408-MV	●	12.7	4.76	0.8	5.16	
	080412-MV	●	12.7	4.76	1.2	5.16	

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<b>UE6110</b>	D1	S1	Re	D2	
<b>MW</b> Breaker    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	
<b>GH</b> Breaker    Semi-Heavy 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	


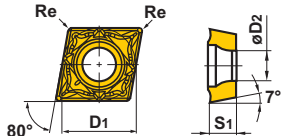

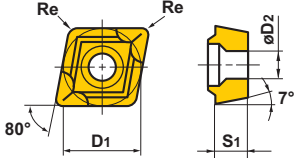

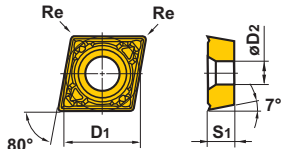

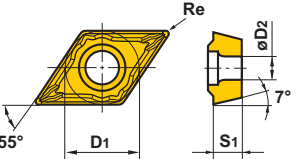

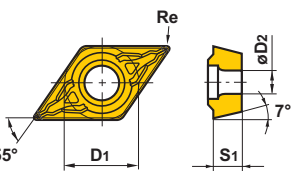

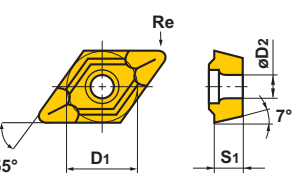
● 5° Positive inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<b>UE6110</b>	D1	S1	Re	D2	
<b>Standard</b> Breaker    Medium Cutting	<b>NEW VBMT160404</b>	●	9.525	4.76	0.4	4.43	
	<b>NEW 160408</b>	●	9.525	4.76	0.8	4.43	


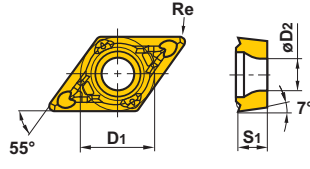

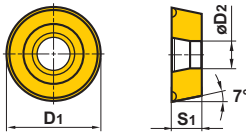

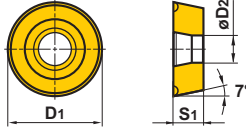

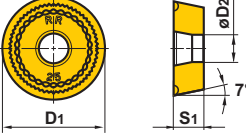

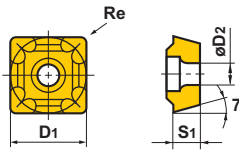

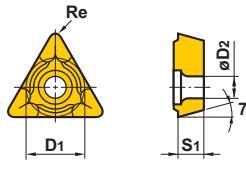

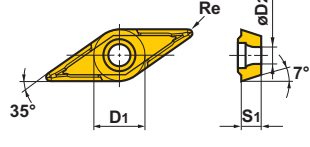
# UE6110

## Inserts

### ● 7° Positive inserts (With hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		UE6110	D1	S1	Re	D2	
<b>SW</b> Breaker   Light Cutting (Wiper)	<b>NEW</b> CCMT060202-SW	●	6.35	2.38	0.2	2.8	
	<b>NEW</b> 060204-SW	●	6.35	2.38	0.4	2.8	
	<b>NEW</b> 09T302-SW	●	9.525	3.97	0.2	4.4	
	<b>NEW</b> 09T304-SW	●	9.525	3.97	0.4	4.4	
<b>Standard</b> Breaker   Medium Cutting	CCMT060202	●	6.35	2.38	0.2	2.8	
	060204	●	6.35	2.38	0.4	2.8	
	060208	●	6.35	2.38	0.8	2.8	
	080302	●	7.94	3.18	0.2	3.4	
	080304	●	7.94	3.18	0.4	3.4	
	080308	●	7.94	3.18	0.8	3.4	
	09T302	●	9.525	3.97	0.2	4.4	
	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		
120412	●	12.7	4.76	1.2	5.5		
<b>MW</b> Breaker   Medium Cutting (Wiper)	<b>NEW</b> CCMT060208-MW	●	6.35	2.38	0.8	2.8	
	<b>NEW</b> 09T304-MW	●	9.525	3.97	0.4	4.4	
	<b>NEW</b> 09T308-MW	●	9.525	3.97	0.8	4.4	
	<b>NEW</b> 120404-MW	●	12.7	4.76	0.4	5.5	
	<b>NEW</b> 120408-MW	●	12.7	4.76	0.8	5.5	
<b>FV</b> Breaker   Finish Cutting	DCMT070202-FV	□	6.35	2.38	0.2	2.8	
	070204-FV	□	6.35	2.38	0.4	2.8	
	11T304-FV	□	9.525	3.97	0.4	4.4	
	11T308-FV	□	9.525	3.97	0.8	4.4	
<b>SV</b> Breaker   Light Cutting	DCMT070202-SV	□	6.35	2.38	0.2	2.8	
	070204-SV	□	6.35	2.38	0.4	2.8	
	070208-SV	□	6.35	2.38	0.8	2.8	
	11T302-SV	□	9.525	3.97	0.2	4.4	
	11T304-SV	□	9.525	3.97	0.4	4.4	
	11T308-SV	□	9.525	3.97	0.8	4.4	
<b>Standard</b> Breaker   Medium Cutting	DCMT070202	●	6.35	2.38	0.2	2.8	
	070204	●	6.35	2.38	0.4	2.8	
	070208	□	6.35	2.38	0.8	2.8	
	11T302	●	9.525	3.97	0.2	4.4	
	11T304	●	9.525	3.97	0.4	4.4	
	11T308	●	9.525	3.97	0.8	4.4	
	11T312	●	9.525	3.97	1.2	4.4	
	150404	●	12.7	4.76	0.4	5.5	
	150408	●	12.7	4.76	0.8	5.5	
150412	●	12.7	4.76	1.2	5.5		


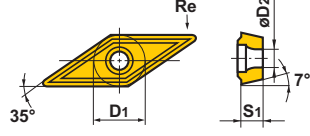

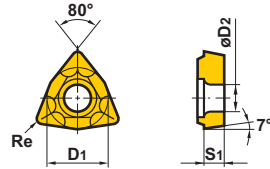
● : Inventory maintained. □ : Non stock, produced to order only.

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>MV</b> Breaker  Medium Cutting	<b>DCMT070202-MV</b>	□	6.35	2.38	0.2	2.8	
	<b>070204-MV</b>	□	6.35	2.38	0.4	2.8	
	<b>070208-MV</b>	□	6.35	2.38	0.8	2.8	
	<b>11T302-MV</b>	□	9.525	3.97	0.2	4.4	
	<b>11T304-MV</b>	□	9.525	3.97	0.4	4.4	
	<b>11T308-MV</b>	□	9.525	3.97	0.8	4.4	
<b>Standard</b> Breaker  Medium Cutting	<b>RCMT0602M0</b>	●	6	2.38	—	2.8	
	<b>0803M0</b>	●	8	3.18	—	3.4	
<b>Standard</b> Breaker  Medium Cutting	<b>RCMX1003M0</b>	●	10	3.18	—	3.6	
	<b>1204M0</b>	●	12	4.76	—	4.2	
	<b>1606M0</b>	●	16	6.35	—	5.2	
	<b>2006M0</b>	●	20	6.35	—	6.5	
	<b>2507M0</b>	●	25	7.94	—	7.2	
	<b>3209M0</b>	□	32	9.52	—	9.5	
<b>RR</b> Breaker  Medium Cutting	<b>RCMX1606M0-RR</b>	□	16	6.35	—	5.2	
	<b>2006M0-RR</b>	□	20	6.35	—	6.5	
	<b>2507M0-RR</b>	□	25	7.94	—	7.2	
	<b>3209M0-RR</b>	□	32	9.52	—	9.5	
<b>Standard</b> Breaker  Medium Cutting	<b>SCMT09T304</b>	●	9.525	3.97	0.4	4.4	
	<b>09T308</b>	●	9.525	3.97	0.8	4.4	
	<b>120404</b>	●	12.7	4.76	0.4	5.5	
	<b>120408</b>	●	12.7	4.76	0.8	5.5	
	<b>120412</b>	●	12.7	4.76	1.2	5.5	
<b>Standard</b> Breaker  Medium Cutting	<b>TCMT090204</b>	●	5.56	2.38	0.4	2.5	
	<b>110202</b>	●	6.35	2.38	0.2	2.8	
	<b>110204</b>	●	6.35	2.38	0.4	2.8	
	<b>110208</b>	●	6.35	2.38	0.8	2.8	
	<b>130304</b>	●	7.94	3.18	0.4	3.4	
	<b>16T304</b>	●	9.525	3.97	0.4	4.4	
	<b>16T308</b>	●	9.525	3.97	0.8	4.4	
	<b>16T312</b>	●	9.525	3.97	1.2	4.4	
<b>FV</b> Breaker  Finish Cutting	<b>VCMT160404-FV</b>	□	9.525	4.76	0.4	4.4	
	<b>160408-FV</b>	□	9.525	4.76	0.8	4.4	


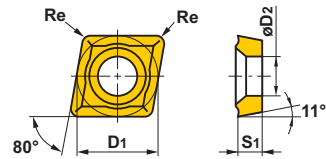
# UE6110

## Inserts

### ● 7° Positive inserts (With hole)


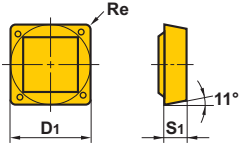

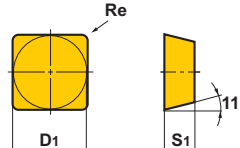

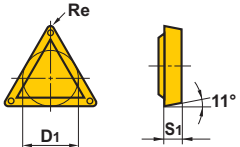

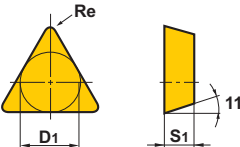
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>Standard Breaker</b> 	<b>VCMT110304</b>	●	6.35	3.18	0.4	2.8	
	<b>160404</b>	●	9.525	4.76	0.4	4.4	
	<b>160408</b>	●	9.525	4.76	0.8	4.4	
	<b>160412</b>	●	9.525	4.76	1.2	4.4	
Medium Cutting							
<b>Standard Breaker</b> 	<b>WCMT020102</b>	●	3.97	1.59	0.2	2.3	
	<b>020104</b>	●	3.97	1.59	0.4	2.3	
	<b>L30202</b>	●	4.76	2.38	0.2	2.3	
	<b>L30204</b>	●	4.76	2.38	0.4	2.3	
	<b>040202</b>	●	6.35	2.38	0.2	2.8	
	<b>040204</b>	●	6.35	2.38	0.4	2.8	
	<b>06T304</b>	●	9.525	3.97	0.4	4.4	
	<b>06T308</b>	●	9.525	3.97	0.8	4.4	
Medium Cutting							

### ● 11° Positive inserts (With hole)


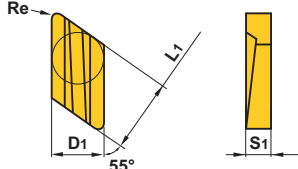
Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	D2	
<b>Standard Breaker</b> 	<b>CPMX080204</b>	●	7.94	2.38	0.4	3.5	
	<b>080208</b>	●	7.94	2.38	0.8	3.5	
	<b>090304</b>	●	9.525	3.18	0.4	4.6	
	<b>090308</b>	●	9.525	3.18	0.8	4.6	
Medium Cutting							



### ● 11° Positive inserts (Without hole)

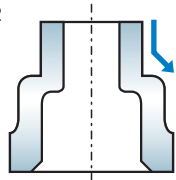
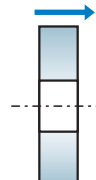
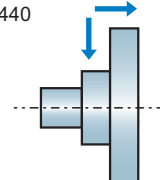
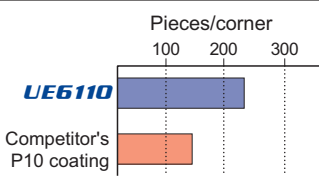
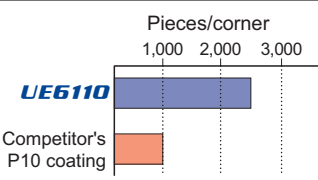
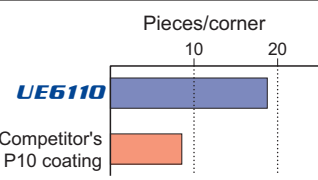
Shape	Order Number	Stock	Dimensions (mm)			Geometry
		<i>UE6110</i>	D1	S1	Re	
<b>Standard Breaker</b>  Light to Medium Cutting	<b>SPMR090304</b>	●	9.525	3.18	0.4	
	<b>090308</b>	●	9.525	3.18	0.8	
	<b>120304</b>	●	12.7	3.18	0.4	
	<b>120308</b>	●	12.7	3.18	0.8	
	<b>120312</b>	●	12.7	3.18	1.2	
<b>Flat Top</b>  Light to Medium Cutting	<b>NEW SPMN090308</b>	●	9.525	3.18	0.8	
	<b>NEW 120304</b>	●	12.7	3.18	0.4	
	<b>NEW 120308</b>	●	12.7	3.18	0.8	
	<b>NEW 120312</b>	●	12.7	3.18	1.2	
	<b>NEW 190412</b>	●	19.05	4.76	1.2	
<b>Standard Breaker</b>  Light to Medium Cutting	<b>TPMR090204</b>	□	5.56	2.38	0.4	
	<b>090208</b>	□	5.56	2.38	0.8	
	<b>110302</b>	□	6.35	3.18	0.2	
	<b>110304</b>	●	6.35	3.18	0.4	
	<b>110308</b>	●	6.35	3.18	0.8	
	<b>160304</b>	●	9.525	3.18	0.4	
	<b>160308</b>	●	9.525	3.18	0.8	
<b>160312</b>	●	9.525	3.18	1.2		
<b>Flat Top</b>  Light to Medium Cutting	<b>NEW TPMN110304</b>	●	6.35	3.18	0.4	
	<b>NEW 110308</b>	●	6.35	3.18	0.8	
	<b>NEW 160304</b>	●	9.525	3.18	0.4	
	<b>NEW 160308</b>	●	9.525	3.18	0.8	
	<b>NEW 160312</b>	●	9.525	3.18	1.2	
	<b>NEW 220404</b>	●	12.7	4.76	0.4	
	<b>NEW 220408</b>	●	12.7	4.76	0.8	
	<b>NEW 220412</b>	●	12.7	4.76	1.2	

### ● Negative Inserts (Without hole)

Shape	Order Number	Stock	Dimensions (mm)				Geometry
		<i>UE6110</i>	D1	S1	Re	L1	
<b>R Breaker</b>  Semi-Heavy Cutting	<b>NEW KNMX190504R</b>	●	9.525	5.5	0.4	15.875	
	<b>NEW 190508R</b>	●	9.525	5.5	0.8	15.875	
	<b>NEW 190512R</b>	●	9.525	5.5	1.2	15.875	

# UE6110

## Application Examples

Insert		CNMG120416-MA	DNMG150612-MV	WNMG080412-MW
Workpiece		JIS SUJ2 	JIS S45C 	JIS SCM440 
Cutting Conditions	Cutting Speed (m/min)	240	140—210	210
	Feed (mm/rev)	0.3—0.4	0.25	0.3
	Depth of Cut (mm)	3.0—4.0	1.0—2.0	3.0
Coolant		Wet cutting	Wet cutting	Wet cutting
Results		<p>Pieces/corner: 100, 200, 300</p>  <p>UE6110 achieved 1.5 times longer tool life without any abnormal wear compared to a competitor's product.</p>	<p>Pieces/corner: 1,000, 2,000, 3,000</p>  <p>UE6110 achieved more than double tool life compared to a competitor's product.</p>	<p>Pieces/corner: 10, 20</p>  <p>UE6110 achieved double tool life compared to a competitor's product.</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 spanner.

## MITSUBISHI MATERIALS CORPORATION



The Scope of the Registration:  
Design, Development, and  
Production of Cemented  
Carbide Tools and Carbide  
Blanks



The Scope of the Registration:  
Design, Development and  
Production of Cutting Tools,  
Wear-resistant Tools, Bore  
Grinding Tools, Cemented  
Carbide Blanks and Coated  
Products



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Carbide Blanks and Coated  
Products

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(Tools specifications subject to change without notice.)