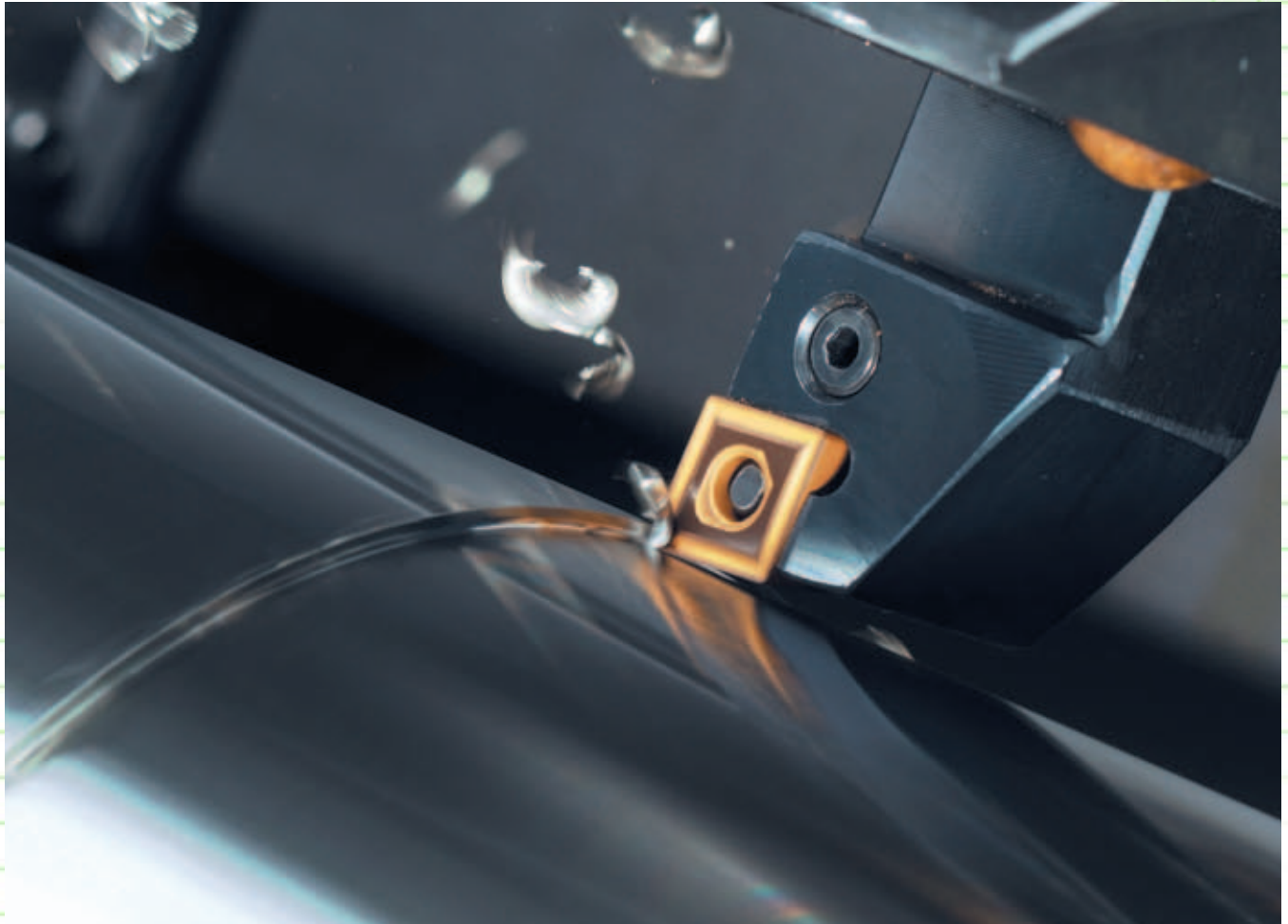




SUMITOMO ELECTRIC

# AC610M/AC630M

*Grades For Turning Stainless Steel & Steel*



# AC610M/AC630M

## Grades for Turning Stainless Steel & Steel

### ■ AC610M Features & Benefits

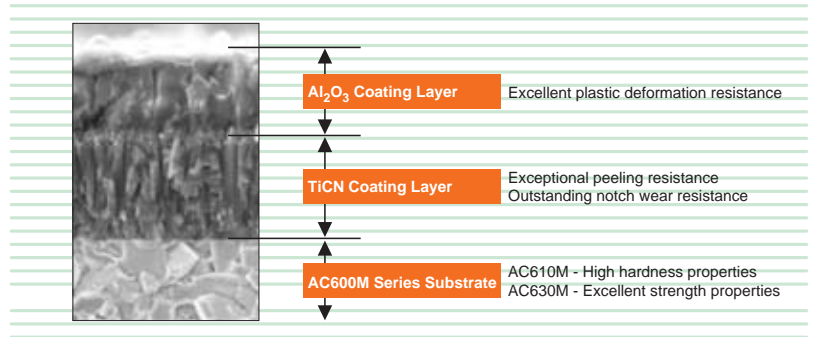
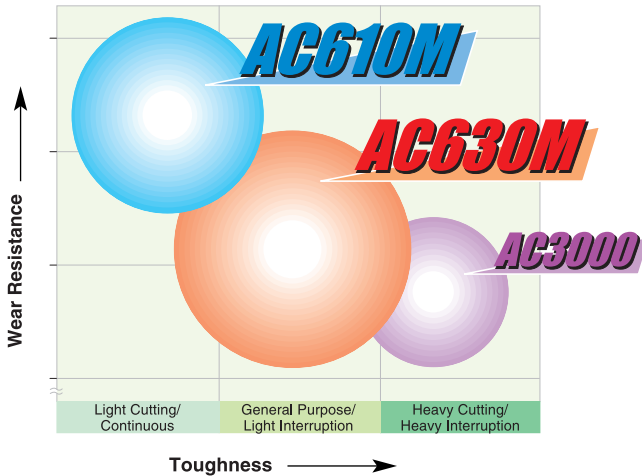
- High speed, high efficiency cutting with a high hardness substrate
- Good plastic deformation and wear resistance
- Polished insert face and cutting edges
- New thin CVD coating layer and sharp edges excel in difficult to machine materials



### ■ AC630M Features & Benefits

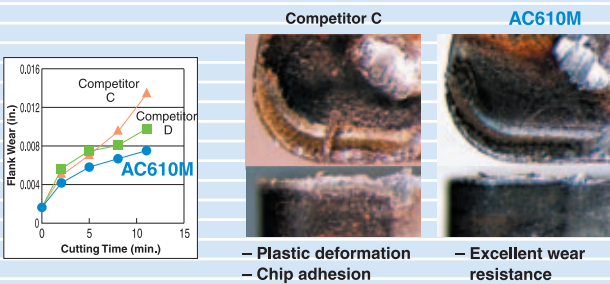
- General cutting grade with a high strength substrate
- Good peeling and notch wear resistance
- Polished insert face and cutting edges
- New thin CVD coating layer and sharp edges excel in difficult to machine materials

### ■ Technical Information



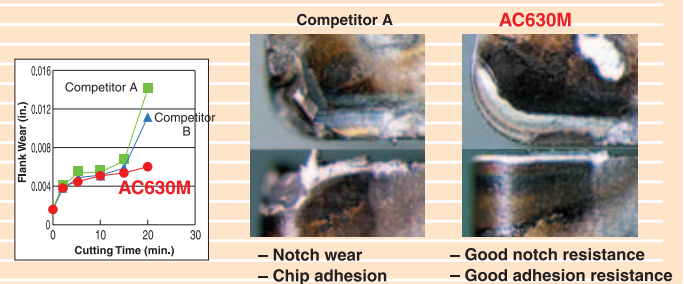
### Application Examples AC610M

Work material: 316 Stainless Steel  
 Insert: CNMG432EGU  
 Cutting Conditions: 650 SFM, 0.010 IPR, DOC 0.060", Wet

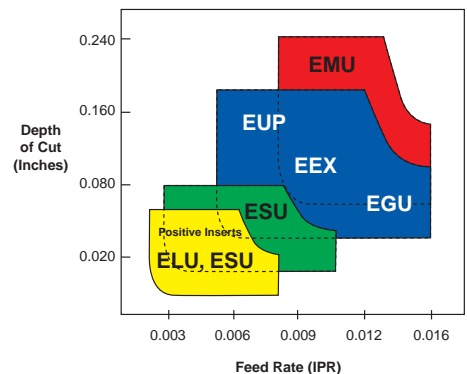
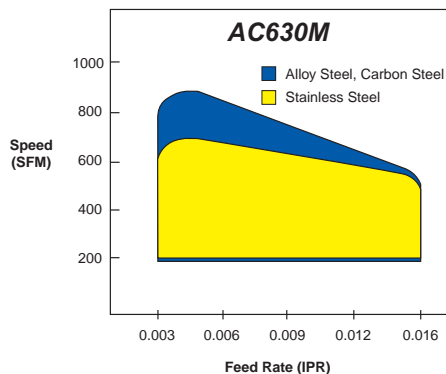
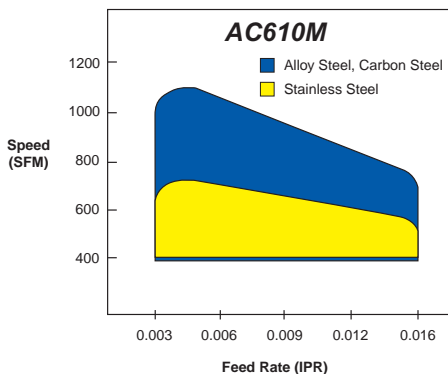


### Application Examples AC630M

Work material: 316 Stainless Steel  
 Insert: CNMG432EGU  
 Cutting Conditions: 500 SFM, 0.010 IPR, DOC 0.060", Wet









### ■ Recommended Running Conditions








AC610M/  
AC630M

### 80° Diamond Negative Inserts

CNMG		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 CNMG 431 ESU	CNMG 120404 N-SU	●	●	1/2	3/16	1/64	.2031
CNMG 432 ESU	CNMG 120408 N-SU	●	●	1/2	3/16	1/32	.2031
CNMG 433 ESU	CNMG 120412 N-SU	●	●	1/2	3/16	3/64	.2031
 CNMG 431 EGU	CNMG 120404 N-GU	●	●	1/2	3/16	1/64	.2031
CNMG 432 EGU	CNMG 120408 N-GU	●	●	1/2	3/16	1/32	.2031
CNMG 433 EGU	CNMG 120412 N-GU	●	●	1/2	3/16	3/64	.2031
 CNMG 432 EGUW	CNMG 120408 N-GUW	●	●	1/2	3/16	1/32	.2031
CNMG 433 EGUW	CNMG 120412 N-GUW	●	●	1/2	3/16	3/64	.2031
 CNMG 432 EUP	CNMG 120408 N-UP	●	●	1/2	3/16	1/32	.2031
CNMG 433 EUP	CNMG 120412 N-UP	●	●	1/2	3/16	3/64	.2031
 CNMG 432 EMU	CNMG 120408 N-MU	●	●	1/2	3/16	1/32	.2031
CNMG 433 EMU	CNMG 120412 N-MU	●	●	1/2	3/16	3/64	.2031
CNMG 434 EMU	CNMG 120416 N-MU	●	●	1/2	3/16	1/16	.2031
CNMG 543 EMU	CNMG 160612 N-MU	●	●	5/8	1/4	3/64	.250
CNMG 544 EMU	CNMG 160616 N-MU	●	●	5/8	1/4	1/16	.250
CNMG 643 EMU	CNMG 190612 N-MU	●	●	3/4	1/4	3/64	.3126
CNMG 644 EMU	CNMG 190616 N-MU	●	●	3/4	1/4	1/16	.3126
 CNMG 431 EEX	CNMG 120404 N-EX	●	●	1/2	3/16	1/64	.2031
CNMG 432 EEX	CNMG 120408 N-EX	●	●	1/2	3/16	1/32	.2031
CNMG 433 EEX	CNMG 120412 N-EX	●	●	1/2	3/16	3/64	.2031





● = Stocked standard items      ★ = Worldwide warehouse items

### 55° Diamond Negative Inserts

DNMG		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 DNMG 431 ESU	DNMG 150404 N-SU	●	●	1/2	3/16	1/64	.2031
DNMG 432 ESU	DNMG 150408 N-SU	●	●	1/2	3/16	1/32	.2031
DNMG 433 ESU	DNMG 150412 N-SU	●	●	1/2	3/16	3/64	.2031
 DNMG 431 EGU	DNMG 150404 N-GU	●	●	1/2	3/16	1/64	.2031
DNMG 432 EGU	DNMG 150408 N-GU	●	●	1/2	3/16	1/32	.2031
DNMG 433 EGU	DNMG 150412 N-GU	●	●	1/2	3/16	3/64	.2031
 DNMG 442 EGU	DNMG 150608 N-GU	★	★	1/2	1/4	1/32	.2031
DNMG 443 EGU	DNMG 150612 N-GU	★	★	1/2	1/4	3/64	.2031
 DNMG 432 EMU	DNMG 150408 N-MU	●	●	1/2	3/16	1/32	.2031
DNMG 433 EMU	DNMG 150412 N-MU	●	●	1/2	3/16	3/64	.2031
DNMG 442 EMU	DNMG 150608 N-MU	★	★	1/2	1/4	1/32	.2031
DNMG 443 EMU	DNMG 150612 N-MU	★	★	1/2	1/4	3/64	.2031
 DNMG 431 EEX	DNMG 150404 N-EX	●	●	1/2	3/16	1/64	.2031
DNMG 432 EEX	DNMG 150408 N-EX	●	●	1/2	3/16	1/32	.2031
DNMG 433 EEX	DNMG 150412 N-EX	●	●	1/2	3/16	3/64	.2031
DNMG 441 EEX	DNMG 150604 N-EX	★	★	1/2	1/4	1/64	.2031
DNMG 442 EEX	DNMG 150608 N-EX	★	★	1/2	1/4	1/32	.2031
DNMG 443 EEX	DNMG 150612 N-EX	★	★	1/2	1/4	3/64	.2031







● = Stocked standard items      ★ = Worldwide warehouse items

### 90° Square Negative Inserts

SNMG		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 SNMG 432 ESU	SNMG 120408 N-SU	●	●	1/2	3/16	1/32	.2031
 SNMG 431 EGU	SNMG 120404 N-GU	★	★	1/2	3/16	1/64	.2031
SNMG 432 EGU	SNMG 120408 N-GU	★	★	1/2	3/16	1/32	.2031
SNMG 433 EGU	SNMG 120412 N-GU	★	★	1/2	3/16	3/64	.2031
SNMG 434 EGU	SNMG 120416 N-GU	★	★	1/2	3/16	1/16	.2031
 SNMG 322 EEX	SNMG 090308 N-EX	●	●	3/8	1/8	1/32	.150
SNMG 431 EEX	SNMG 120404 N-EX	★	★	1/2	3/16	1/64	.2031
SNMG 432 EEX	SNMG 120408 N-EX	●	●	1/2	3/16	1/32	.2031
SNMG 433 EEX	SNMG 120412 N-EX	●	●	1/2	3/16	3/64	.2031
 SNMG 432 EMU	SNMG 120408 N-MU	●	●	1/2	3/16	1/32	.2031
SNMG 433 EMU	SNMG 120412 N-MU	●	●	1/2	3/16	3/64	.2031
SNMG 543 EMU	SNMG 150612 N-MU	●	●	5/8	1/4	3/64	.250
SNMG 544 EMU	SNMG 150616 N-MU	●	●	5/8	1/4	1/16	.250
SNMG 643 EMU	SNMG 190612 N-MU	●	●	3/4	1/4	3/64	.3126
SNMG 644 EMU	SNMG 190616 N-MU	●	●	3/4	1/4	1/16	.3126




● = Stocked standard items      ★ = Worldwide warehouse items

### 60° Triangle Negative Inserts

TNMG		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 TNMG 331 ESU	TNMG 160404 N-SU	●	●	3/8	3/16	1/64	.150
TNMG 332 ESU	TNMG 160408 N-SU	●	●	3/8	3/16	1/32	.150
TNMG 333 ESU	TNMG 160412 N-SU	★	★	3/8	3/16	3/64	.150
 TNMG 331 EGU	TNMG 160404 N-GU	●	●	3/8	3/16	1/64	.150
TNMG 332 EGU	TNMG 160408 N-GU	●	●	3/8	3/16	1/32	.150
TNMG 333 EGU	TNMG 160412 N-GU	●	●	3/8	3/16	3/64	.150
 TNMG 334 EGU	TNMG 160416 N-GU	●	●	3/8	3/16	1/16	.150
TNMG 432 EGU	TNMG 220408 N-GU	●	●	1/2	3/16	1/32	.2031
TNMG 433 EGU	TNMG 220412 N-GU	●	●	1/2	3/16	3/64	.2031
 TNMG 331 EEX	TNMG 160404 N-EX	●	●	3/8	3/16	1/64	.150
TNMG 332 EEX	TNMG 160408 N-EX	●	●	3/8	3/16	1/32	.150
TNMG 333 EEX	TNMG 160412 N-EX	★	★	3/8	3/16	3/64	.150
 TNMG 332 EUP	TNMG 160408 N-UP	●	●	3/8	3/16	1/32	.150
TNMG 333 EUP	TNMG 160412 N-UP	●	●	3/8	3/16	3/64	.150
 TNMG 332 EMU	TNMG 160408 N-MU	●	●	3/8	3/16	1/32	.150
TNMG 333 EMU	TNMG 160412 N-MU	●	●	3/8	3/16	3/64	.150
TNMG 432 EMU	TNMG 220408 N-MU	●	●	1/2	3/16	1/32	.2031
TNMG 433 EMU	TNMG 220412 N-MU	●	●	1/2	3/16	3/64	.2031







● = Stocked standard items      ★ = Worldwide warehouse items

### 35° Diamond Negative Inserts

VNMG		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 VNMG 331 ESU	VNMG 160404 N-SU	●	●	3/8	3/16	1/64	.150
VNMG 332 ESU	VNMG 160408 N-SU	●	●	3/8	3/16	1/32	.150
 VNMG 331 EGU	VNMG 160404 N-GU	●	●	3/8	3/16	1/64	.150
VNMG 332 EGU	VNMG 160408 N-GU	●	●	3/8	3/16	1/32	.150
 VNMG 331 EEX	VNMG 160404 N-EX	●	●	3/8	3/16	1/64	.150
VNMG 332 EEX	VNMG 160408 N-EX	●	●	3/8	3/16	1/32	.150



● = Stocked standard items      ★ = Worldwide warehouse items

### 80° Trigon Negative Inserts

WNMG		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 WNMG 431 EEX	WNMG 080404 N-EX	●	●	1/2	3/16	1/64	.2031
WNMG 432 EEX	WNMG 080408 N-EX	●	●	1/2	3/16	1/32	.2031
WNMG 433 EEX	WNMG 080412 N-EX	●	●	1/2	3/16	3/64	.2031
 WNMG 431 ESU	WNMG 080404 N-SU	●	●	1/2	3/16	1/64	.2031
WNMG 432 ESU	WNMG 080408 N-SU	●	●	1/2	3/16	1/32	.2031
WNMG 433 ESU	WNMG 080412 N-SU	●	●	1/2	3/16	3/64	.2031
 WNMG 431 EGU	WNMG 080404 N-GU	●	●	1/2	3/16	1/64	.2031
WNMG 432 EGU	WNMG 080408 N-GU	●	●	1/2	3/16	1/32	.2031
WNMG 433 EGU	WNMG 080412 N-GU	●	●	1/2	3/16	3/64	.2031
 WNMG 432 EGUW	WNMG 080408 N-GUW	●	●	1/2	3/16	1/32	.2031
WNMG 433 EGUW	WNMG 080412 N-GUW	●	●	1/2	3/16	3/64	.2031
 WNMG 432 EUP	WNMG 080408 N-UP	●	●	1/2	3/16	1/32	.2031
WNMG 433 EUP	WNMG 080412 N-UP	●	●	1/2	3/16	3/64	.2031
 WNMG 432 EMU	WNMG 080408 N-MU	●	●	1/2	3/16	1/32	.2031
WNMG 433 EMU	WNMG 080412 N-MU	●	●	1/2	3/16	3/64	.2031

● = Stocked standard items      ★ = Worldwide warehouse items

### 55° SumiTurn T-Rex Inserts

TRM		Coated		Dimensions (Inches)			
		AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.
Sumitomo Cat. No.	New ISO Cat. No.						
 TRM 551704 SU	TRM 551704 SU	●	●	0.394	0.197	1/64	.084
TRM 551708 SU	TRM 551708 SU	●	●	0.394	0.197	1/32	.084
TRM 551712 SU	TRM 551712 SU	●	●	0.394	0.197	3/64	.084
 TRM 551704 GU	TRM 551704 GU	●	●	0.394	0.197	1/64	.084
TRM 551708 GU	TRM 551708 GU	●	●	0.394	0.197	1/32	.084
TRM 551712 GU	TRM 551712 GU	●	●	0.394	0.197	3/64	.084





● = Stocked standard items      ★ = Worldwide warehouse items

AC610M/  
AC630M

# AC610M/AC630M





## Grades for Turning Stainless Steel & Steel

### 80° Diamond Positive Inserts

<table border="1"> <tr><th>CCMT</th></tr> <tr><th>CPMT</th></tr> </table>		CCMT	CPMT	Coated		Dimensions (Inches)			
		CCMT							
CPMT									
AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.				
Sumitomo Cat. No.	New ISO Cat. No.								
 CCMT 21.50.5 ELU	CCMT 060202 N-LU	●	●	1/4	3/32	1/128	.110		
CCMT 21.51 ELU	CCMT 060204 N-LU	●	●	1/4	3/32	1/64	.110		
CCMT 32.51 ELU	CCMT 09T304 N-LU	●	●	3/8	5/32	1/64	.1732		
CCMT 32.52 ELU	CCMT 09T308 N-LU	●	●	3/8	5/32	1/32	.1732		
 CCMT 21.50.5 ESU	CCMT 060202 N-SU	●	●	1/4	3/32	1/128	.110		
CCMT 21.51 ESU	CCMT 060204 N-SU	●	●	1/4	3/32	1/64	.110		
CCMT 21.52 ESU	CCMT 060208 N-SU	●	●	1/4	3/32	1/32	.110		
CCMT 32.50.5 ESU	CCMT 09T302 N-SU	●	●	3/8	5/32	1/128	.1732		
CCMT 32.51 ESU	CCMT 09T304 N-SU	●	●	3/8	5/32	1/64	.1732		
CCMT 32.52 ESU	CCMT 09T308 N-SU	●	●	3/8	5/32	1/32	.1732		
 CPMT 321 ELU	CPMT 090304 N-LU	●	●	3/8	1/8	1/64	.1732		
 CPMT 2.51.51 ESU	CPMT 080204 N-SU	★	★	5/16	3/32	1/64	.134		
CPMT 2.51.52 ESU	CPMT 080208 N-SU	★	★	5/16	3/32	1/32	.134		
CPMT 321 ESU	CPMT 090304 N-SU	●	●	3/8	1/8	1/64	.1732		
CPMT 322 ESU	CPMT 090308 N-SU	●	●	3/8	1/8	1/32	.1732		



● = Stocked standard items    ★ = Worldwide warehouse items

### 60° Triangle Positive Inserts

<table border="1"> <tr><th>TCMT</th></tr> <tr><th>TPMT</th></tr> </table>		TCMT	TPMT	Coated		Dimensions (Inches)			
		TCMT							
TPMT									
AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.				
Sumitomo Cat. No.	New ISO Cat. No.								
 TCMT 21.51 ELU	TCMT 110204 N-LU	●	●	1/4	3/32	1/64	.110		
TCMT 21.52 ELU	TCMT 110208 N-LU	●	●	1/4	3/32	1/32	.110		
 TCMT 21.51 ESU	TCMT 110204 N-SU	●	●	1/4	3/32	1/64	.110		
TCMT 21.52 ESU	TCMT 110208 N-SU	●	●	1/4	3/32	1/32	.110		
TCMT 32.51 ESU	TCMT 16T304 N-SU	●	●	3/8	5/32	1/64	.1693		
TCMT 32.52 ESU	TCMT 16T308 N-SU	●	●	3/8	5/32	1/32	.1693		
 TPMT 221 ELU	TPMT 110304 N-LU	●	●	1/4	1/8	1/64	.130		
TPMT 222 ELU	TPMT 110308 N-LU	●	●	1/4	1/8	1/32	.130		
 TPMT 220.5 ESU	TPMT 110302 N-SU	●	●	1/4	1/8	1/128	.130		
TPMT 221 ESU	TPMT 110304 N-SU	●	●	1/4	1/8	1/64	.130		
TPMT 222 ESU	TPMT 110308 N-SU	●	●	1/4	1/8	1/32	.130		
TPMT 331 ESU	TPMT 160404 N-SU	●	●	3/8	3/16	1/64	.1693		
TPMT 332 ESU	TPMT 160408 N-SU	●	●	3/8	3/16	1/32	.1693		





● = Stocked standard items    ★ = Worldwide warehouse items

### 55° Diamond Positive Inserts

<table border="1"> <tr><th>DCMT</th></tr> </table>		DCMT	Coated		Dimensions (Inches)			
		DCMT						
AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.			
Sumitomo Cat. No.	New ISO Cat. No.							
 DCMT 21.50.5 ELU	DCMT 070202 N-LU	●	●	1/4	3/32	1/128	.110	
DCMT 21.51 ELU	DCMT 070204 N-LU	●	●	1/4	3/32	1/64	.110	
DCMT 32.51 ELU	DCMT 11T304 N-LU	●	●	3/8	5/32	1/64	.1732	
DCMT 32.52 ELU	DCMT 11T308 N-LU	●	●	3/8	5/32	1/32	.1732	
 DCMT 21.50.5 ESU	DCMT 070202 N-SU	●	●	1/4	3/32	1/128	.110	
DCMT 21.51 ESU	DCMT 070204 N-SU	●	●	1/4	3/32	1/64	.110	
DCMT 21.52 ESU	DCMT 070208 N-SU	●	●	1/4	3/32	1/32	.110	
DCMT 32.50.5 ESU	DCMT 11T302 N-SU	●	●	3/8	5/32	1/128	.1732	
DCMT 32.51 ESU	DCMT 11T304 N-SU	●	●	3/8	5/32	1/64	.1732	
DCMT 32.52 ESU	DCMT 11T308 N-SU	●	●	3/8	5/32	1/32	.1732	




● = Stocked standard items    ★ = Worldwide warehouse items

### 35° Diamond Positive Inserts

<table border="1"> <tr><th>VBMT</th></tr> <tr><th>VCMT</th></tr> </table>		VBMT	VCMT	Coated		Dimensions (Inches)			
		VBMT							
VCMT									
AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.				
Sumitomo Cat. No.	New ISO Cat. No.								
 VBMT 221 ELU	VBMT 110304 N-LU	●	●	1/4	1/8	1/64	.134		
VBMT 331 ELU	VBMT 160404 N-LU	●	●	3/8	3/16	1/64	.1732		
VBMT 332 ELU	VBMT 160408 N-LU	●	●	3/8	3/16	1/32	.1732		
 VBMT 221 ESU	VBMT 110304 N-SU	●	●	1/4	1/8	1/64	.134		
VBMT 222 ESU	VBMT 110308 N-SU	●	●	1/4	1/8	1/32	.134		
VBMT 331 ESU	VBMT 160404 N-SU	●	●	3/8	3/16	1/64	.1732		
VBMT 332 ESU	VBMT 160408 N-SU	●	●	3/8	3/16	1/32	.1732		
 VCMT 331 ELU	VCMT 160404 N-LU	●	●	3/8	3/16	1/64	.1732		
VCMT 332 ELU	VCMT 160408 N-LU	●	●	3/8	3/16	1/32	.1732		
 VCMT 331 ESU	VCMT 160404 N-SU	●	●	3/8	3/16	1/64	.1732		
VCMT 332 ESU	VCMT 160408 N-SU	●	●	3/8	3/16	1/32	.1732		

● = Stocked standard items    ★ = Worldwide warehouse items

### 90° Square Positive Inserts

<table border="1"> <tr><th>SCMT</th></tr> <tr><th>SPMT</th></tr> </table>		SCMT	SPMT	Coated		Dimensions (Inches)			
		SCMT							
SPMT									
AC610M	AC630M	Inscribed Circle	Thickness	Nose Radius	Insert Hole Dia.				
Sumitomo Cat. No.	New ISO Cat. No.								
 SCMT 32.51 ELU	SCMT 09T304 N-LU	●	★	3/8	5/32	1/64	.1732		
SCMT 32.52 ELU	SCMT 09T308 N-LU	●	●	3/8	5/32	1/32	.1732		
 SCMT 32.51 ESU	SCMT 09T304 N-SU	●	★	3/8	5/32	1/64	.1732		
SCMT 32.52 ESU	SCMT 09T308 N-SU	●	●	3/8	5/32	1/32	.1732		
 SPMT 321 ELU	SPMT 090304 N-LU	●	●	3/8	1/8	1/64	.130		
SPMT 322 ELU	SPMT 090308 N-LU	●	●	3/8	1/8	1/32	.130		

● = Stocked standard items    ★ = Worldwide warehouse items

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