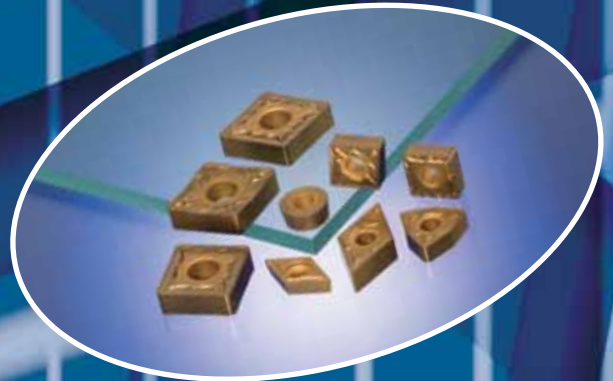




# SUMITOMO

CARBIDE - CBN - DIAMOND

## AC810P AC820P AC830P



Including new chipbreakers:  
EME, ESE, ESEW



New Generation of Steel Turning Grades

**New Super FF - ultra hard - ultra smooth coating with outstanding wear and breakage resistance for high speed, continuous, & interrupted applications**



# AC810P/AC820P/AC830P

## New Generation of Steel Turning Grades

### General Features

Sumitomo Electric Carbide, Inc. introduces the next generation of P10, P20, and P30 coated carbide grades with AC810P, AC820P, and AC830P. Together these new grades machine applications ranging from high speed finishing to general purpose to heavy roughing in steel and stainless steel.

### Grade Features

#### • Improves Productivity

The ultra hard - ultra smooth super FINE and super FLAT coating greatly improves both heat and wear resistance - resulting in higher speeds and feeds - more parts per hour.

#### • Increased Tool Life

The high bonding strength of the "Super FF coat" yields significant increases in tool life.

#### • Wide Application Range

Excellent on all continuous high speed cutting applications, all general purpose, carbon, alloyed, and difficult to machine steels - ideal for roughing or medium cutting applications.

### AC810P

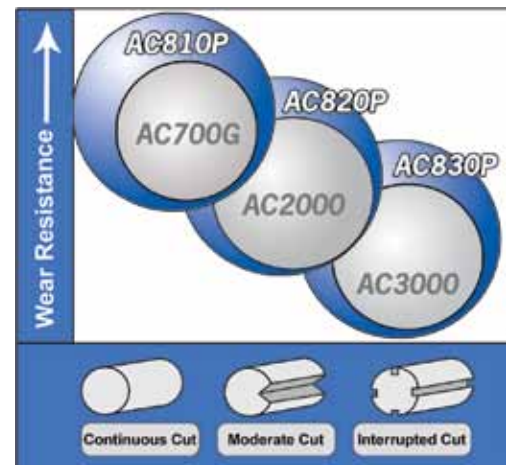
For high speed, high efficiency cutting of steels and stainless steels

### AC820P

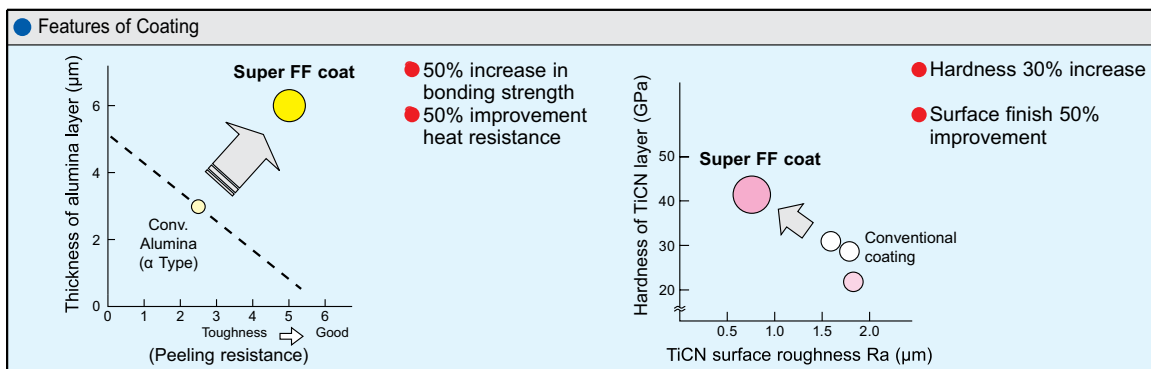
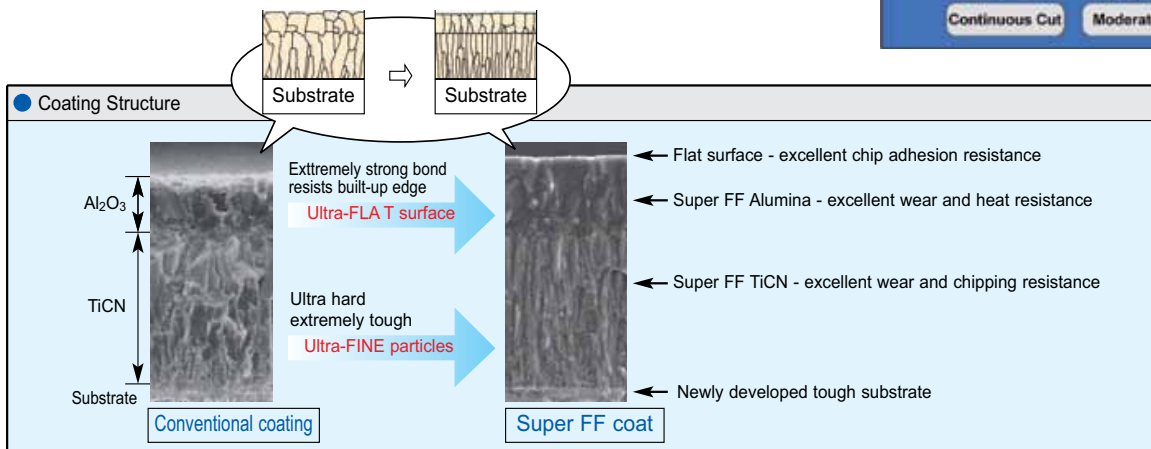
For general purpose turning of steels and stainless steels

### AC830P

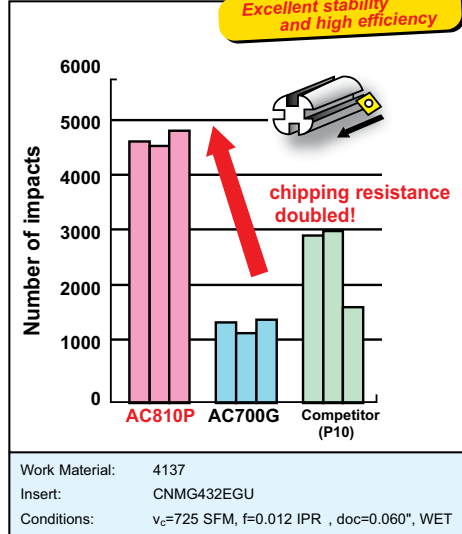
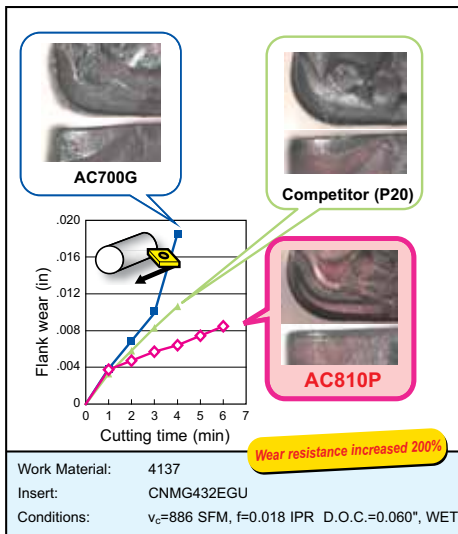
For interrupted roughing of steels and stainless steels



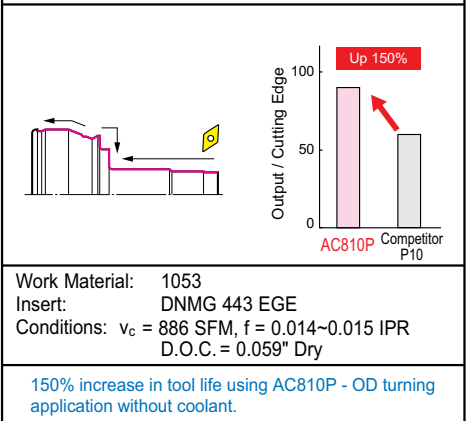
### Technical Features



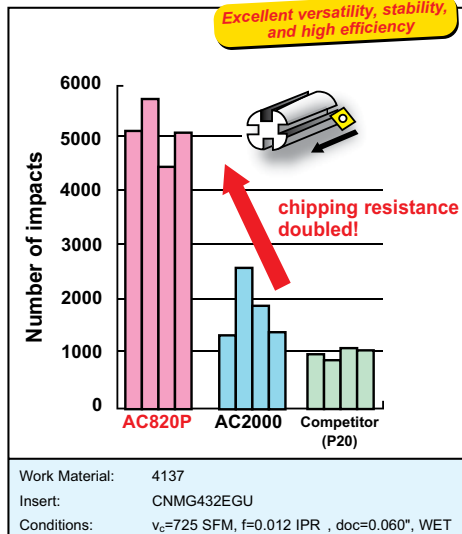
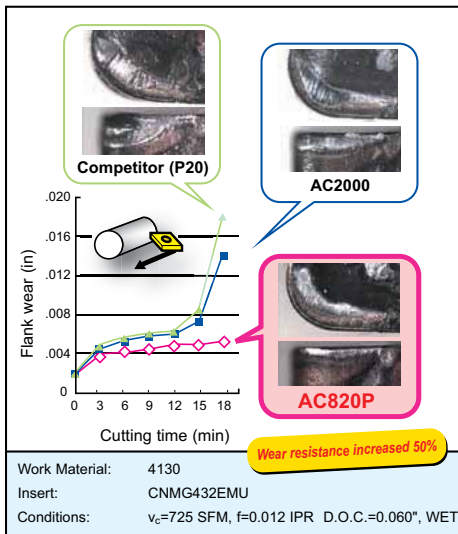
### ● AC810P



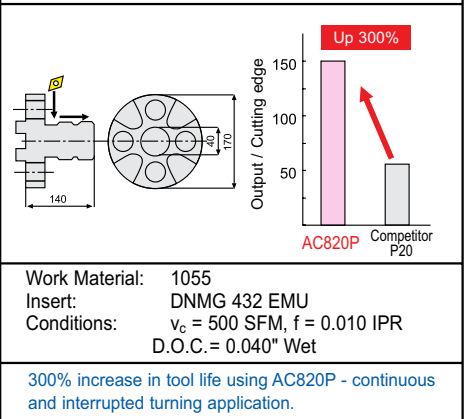
### ● CVJ Outer Race



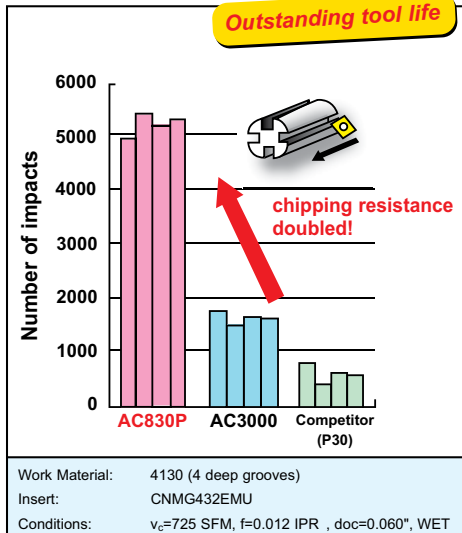
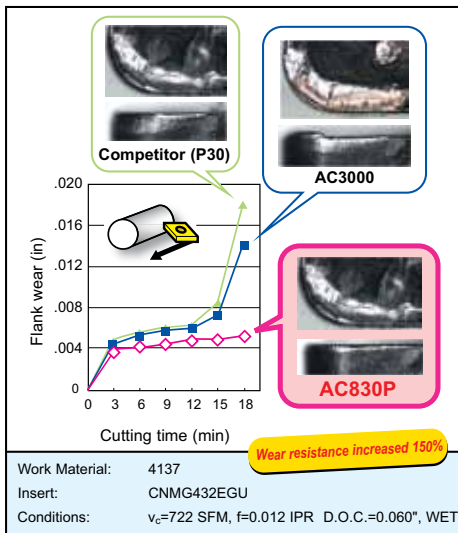
### ● AC820P



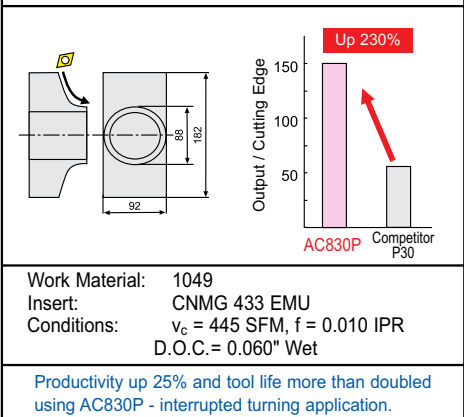
### ● Gear (Construction machine)



### ● AC830P



### ● Machine part



### Recommended Cutting Conditions

AC810P STEEL	Mild Steel Low Carbon Steel Low Alloy Steel (Up to 180HB)						High Carbon Steel High Alloy Steel (Over 180HB)					
	Speed (SFM)		Feed (IPR)		D.O.C. (inch)		Speed (SFM)		Feed (IPR)		D.O.C. (inch)	
Finishing	1200		0.005		0.033		525		0.007		0.033	
	800	1600	0.002	0.008	0.005	0.060	800	1250	0.002	0.012	0.005	0.060
General Purpose	1100		0.014		0.120		925		0.015		0.260	
	800	1400	0.008	0.020	0.040	0.200	700	1150	0.010	0.020	0.060	0.200
Roughing	850		0.014		0.120		800		0.014		0.118	
	700	1000	0.008	0.024	0.071	0.236	600	1000	0.008	0.024	0.071	0.236

AC810P STAINLESS STEEL	300 Series Stainless Steel						400 Series Stainless Steel					
	Speed (SFM)		Feed (IPR)		D.O.C. (inch)		Speed (SFM)		Feed (IPR)		D.O.C. (inch)	
Finishing	600		0.006		0.280		600		0.006		0.045	
	450	750	0.002	0.010	0.500	0.060	450	750	0.002	0.010	0.005	0.060
General Purpose	550		0.012		0.095		550		0.012		0.087	
	400	700	0.008	0.016	0.040	0.150	400	700	0.004	0.016	0.031	0.150
Roughing	450		0.015		0.120		450		0.015		0.118	
	350	550	0.010	0.020	0.071	0.236	350	550	0.010	0.020	0.071	0.236

AC820P STEEL	Mild Steel Low Carbon Steel Low Alloy Steel (Up to 180HB)						High Carbon Steel High Alloy Steel (Over 180HB)					
	Speed (SFM)		Feed (IPR)		D.O.C. (inch)		Speed (SFM)		Feed (IPR)		D.O.C. (inch)	
Finishing	820		0.008		0.060		700		0.008		0.060	
	500	1150	0.004	0.016	0.020	0.080	400	1000	0.004	0.016	0.020	0.080
General Purpose	750		0.009		0.087		600		0.009		0.087	
	500	1000	0.004	0.018	0.031	0.200	325	900	0.004	0.018	0.031	0.197
Roughing	650		0.014		0.120		500		0.014		0.118	
	425	920	0.008	0.024	0.071	0.236	260	750	0.008	0.024	0.071	0.236

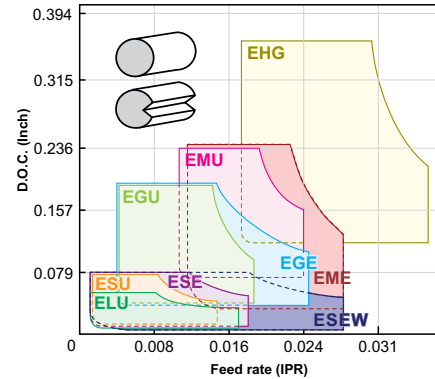
AC820P STAINLESS STEEL	300 Series Stainless Steel						400 Series Stainless Steel					
	Speed (SFM)		Feed (IPR)		D.O.C. (inch)		Speed (SFM)		Feed (IPR)		D.O.C. (inch)	
Finishing	500		0.006		0.045		470		0.006		0.045	
	400	590	0.002	0.010	0.005	0.060	310	625	0.002	0.010	0.005	0.060
General Purpose	450		0.012		0.087		400		0.012		0.087	
	300	600	0.004	0.016	0.031	0.150	200	600	0.004	0.016	0.031	0.150
Roughing	425		0.015		0.120		400		0.015		0.118	
	300	550	0.010	0.020	0.071	0.236	200	600	0.010	0.020	0.071	0.236

AC830P STEEL	Mild Steel Low Carbon Steel Low Alloy Steel (Up to 180HB)						High Carbon Steel High Alloy Steel (Over 180HB)					
	Speed (SFM)		Feed (IPR)		D.O.C. (inch)		Speed (SFM)		Feed (IPR)		D.O.C. (inch)	
Finishing	650		0.008		0.051		600		0.008		0.051	
	400	980	0.004	0.016	0.020	0.080	400	820	0.004	0.016	0.020	0.080
General Purpose	650		0.010		0.087		500		0.010		0.087	
	400	980	0.004	0.024	0.031	0.200	325	650	0.004	0.024	0.031	0.197
Roughing	600		0.014		0.120		425		0.014		0.118	
	325	820	0.008	0.024	0.071	0.236	260	600	0.008	0.024	0.071	0.236

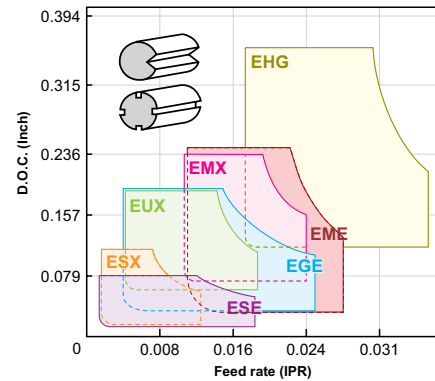
AC830P STAINLESS STEEL	300 Series Stainless Steel						400 Series Stainless Steel					
	Speed (SFM)		Feed (IPR)		D.O.C. (inch)		Speed (SFM)		Feed (IPR)		D.O.C. (inch)	
Finishing	440		0.006		0.045		420		0.006		0.045	
	360	520	0.002	0.010	0.005	0.060	280	560	0.002	0.010	0.005	0.060
General Purpose	450		0.012		0.087		400		0.012		0.087	
	300	600	0.004	0.016	0.031	0.150	200	600	0.004	0.016	0.031	0.150
Roughing	425		0.015		0.118		375		0.015		0.118	
	300	550	0.010	0.020	0.071	0.236	200	550	0.010	0.020	0.071	0.236

### Chipbreaker Comparison

High Speed ~ Light Interrupted Cut



Light Interrupted Cut ~ Heavy Interrupted Cut



● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

Insert Availability - **NEGATIVE**

<b>CNMG 80° Diamond/Negative</b>								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CNMG431EFL	CNMG120404N-FL	●	●		.500	.1875	.0156	.2031
CNMG432EFL	CNMG120408N-FL	●	●		.500	.1875	.0313	.2031
CNMG321ESU	CNMG090304N-SU	★			.375	.125	.0156	.150
CNMG322ESU	CNMG090308N-SU	★			.375	.125	.0313	.150
CNMG331ESU	CNMG090404N-SU	★			.500	.1875	.0156	.2031
CNMG332ESU	CNMG090408N-SU	★			.500	.1875	.0313	.2031
CNMG431ESU	CNMG120404N-SU	●	●	●	.500	.1875	.0156	.2031
CNMG432ESU	CNMG120408N-SU	●	●	●	.500	.1875	.0313	.2031
CNMG433ESU	CNMG120412N-SU	●	●	●	.500	.1875	.0469	.2031
CNMG431ESE	CNMG120404N-SE	●	●	★	.500	.1875	.0156	.2031
CNMG432ESE	CNMG120408N-SE	●	●	●	.500	.1875	.0313	.2031
CNMG433ESE	CNMG120412N-SE	●	●	●	.500	.1875	.0469	.2031
CNMG432ESEW	CNMG120408N-SEW	●	●	●	.500	.1875	.0313	.2031
CNMG433ESEW	CNMG120412N-SEW	●	●	●	.500	.1875	.0469	.2031
CNMG321ELU	CNMG090304N-LU	●	★		.375	.125	.0156	.150
CNMG322ELU	CNMG090308N-LU	●	★		.375	.125	.0313	.150
CNMG431ELU	CNMG120404N-LU	●	●	●	.500	.1875	.0156	.2031
CNMG432ELU	CNMG120408N-LU	●	●	●	.500	.1875	.0313	.2031
CNMG433ELU	CNMG120412N-LU	●	●	●	.500	.1875	.0469	.2031
CNMG431ELUW	CNMG120404N-LUW	●	●	●	.500	.1875	.0156	.2031
CNMG432ELUW	CNMG120408N-LUW	●	●	●	.500	.1875	.0313	.2031
CNMG433ELUW	CNMG120412N-LUW	●	●	●	.500	.1875	.0469	.2031
CNMG431ENK	CNMG120404N-SK	●	●		.500	.1875	.0156	.2031
CNMG432ENK	CNMG120408N-SK	●	●		.500	.1875	.0313	.2031
CNMG431ESX	CNMG120404N-SX	●	●	●	.500	.1875	.0156	.2031
CNMG432ESX	CNMG120408N-SX	●	●	●	.500	.1875	.0313	.2031
CNMG433ESX	CNMG120412N-SX	●	●	●	.500	.1875	.0469	.2031
CNMG431EUP	CNMG120404N-UP	●	●	●	.500	.1875	.0156	.2031
CNMG432EUP	CNMG120408N-UP	●	●	●	.500	.1875	.0313	.2031
CNMG433EUP	CNMG120412N-UP	●	●	●	.500	.1875	.0469	.2031
CNMG542EUP	CNMG160608N-UP	●	●	●	.625	.250	.0313	.250
CNMG543EUP	CNMG160612N-UP	●	●	●	.625	.250	.0469	.250
CNMG643EUP	CNMG190612N-UP	●	●	●	.750	.250	.0469	.3126
CNMG322EGU	CNMG090308N-GU	★			.375	.125	.0313	.150
CNMG431EGU	CNMG120404N-GU	●	●	●	.500	.1875	.0156	.2031
CNMG432EGU	CNMG120408N-GU	●	●	●	.500	.1875	.0313	.2031
CNMG433EGU	CNMG120412N-GU	●	●	●	.500	.1875	.0469	.2031
CNMG434EGU	CNMG120416N-GU	●	●	●	.500	.1875	.0625	.2031
CNMG542EGU	CNMG160608N-GU	●	●	●	.625	.250	.0313	.250
CNMG543EGU	CNMG160612N-GU	●	●	●	.625	.250	.0469	.250
CNMG544EGU	CNMG160616N-GU	●	●	●	.625	.250	.0625	.250
CNMG432EGUW	CNMG120408N-GUW	●	●	●	.500	.1875	.0313	.2031
CNMG433EGUW	CNMG120412N-GUW	●	●	●	.500	.1875	.0469	.2031
CNMG322EUX	CNMG090308N-UX	●	●	●	.375	.125	.0313	.150
CNMG431EUX	CNMG120404N-UX	●	●	●	.500	.1875	.0156	.2031
CNMG432EUX	CNMG120408N-UX	●	●	●	.500	.1875	.0313	.2031
CNMG433EUX	CNMG120412N-UX	●	●	●	.500	.1875	.0469	.2031
CNMG434EUX	CNMG120416N-UX	●	●	●	.500	.1875	.0625	.2031
CNMG542EUX	CNMG160608N-UX	●	●	●	.625	.250	.0313	.250
CNMG543EUX	CNMG160612N-UX	●	●	●	.625	.250	.0469	.250
CNMG544EUX	CNMG160616N-UX	●	●	●	.625	.250	.0625	.250
CNMG642EUX	CNMG190608N-UX	●	●	●	.750	.250	.0313	.3126
CNMG643EUX	CNMG190612N-UX	●	●	●	.750	.250	.0469	.3126
CNMG644EUX	CNMG190616N-UX	●	●	●	.750	.250	.0625	.3126
CNMG431EGE	CNMG120404N-GE	★	●	●	.500	.1875	.0156	.2031
CNMG432EGE	CNMG120408N-GE	●	●	●	.500	.1875	.0313	.2031
CNMG433EGE	CNMG120412N-GE	●	●	●	.500	.1875	.0469	.2031
CNMG434EGE	CNMG120416N-GE	★	●	●	.500	.1875	.0625	.2031
CNMG543EGE	CNMG160612N-GE	●	●	●	.625	.250	.0469	.250

● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

<b>CNMG 80° Diamond/Negative (continued)</b>								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CNMG544EGE	CNMG160616N-GE	●	●	●	.625	.250	.0625	.250
CNMG643EGE	CNMG190612N-GE	●	●	●	.750	.250	.0469	.3126
CNMG644EGE	CNMG190616N-GE	●	●	●	.750	.250	.0625	.3126
CNMG321ENG	CNMG090304N-UG		★		.375	.125	.0156	.150
CNMG322ENG	CNMG090308N-UG		●		.375	.125	.0313	.150
CNMG431ENG	CNMG120404N-UG		●	●	.500	.1875	.0156	.2031
CNMG432ENG	CNMG120408N-UG		●	●	.500	.1875	.0313	.2031
CNMG433ENG	CNMG120412N-UG		●	●	.500	.1875	.0469	.2031
CNMG434ENG	CNMG120416N-UG		★	★	.500	.1875	.0625	.2031
CNMG542ENG	CNMG160608N-UG		●	●	.625	.250	.0313	.250
CNMG543ENG	CNMG160612N-UG		●	●	.625	.250	.0469	.250
CNMG544ENG	CNMG160616N-UG		●	★	.625	.250	.0625	.250
CNMG642ENG	CNMG190608N-UG		●	●	.750	.250	.0313	.3126
CNMG643ENG	CNMG190612N-UG		●	●	.750	.250	.0469	.3126
CNMG644ENG	CNMG190616N-UG		●	★	.750	.250	.0625	.3126
CNMG432ENZ	CNMG120408N-NZ		●	●	.500	.1875	.0313	.2031
CNMG433ENZ	CNMG120412N-NZ		●	●	.500	.1875	.0469	.2031
CNMG542ENZ	CNMG160608N-NZ		●	●	.625	.250	.0313	.250
CNMG543ENZ	CNMG160612N-NZ		●	●	.625	.250	.0469	.250
CNMG544ENZ	CNMG160616N-NZ		●	●	.625	.250	.0625	.250
CNMG642ENZ	CNMG190608N-NZ		●	●	.750	.250	.0313	.3126
CNMG643ENZ	CNMG190612N-NZ		●	●	.750	.250	.0469	.3126
CNMG644ENZ	CNMG190616N-NZ		●	●	.750	.250	.0625	.3126
CNMG432EMU	CNMG120408N-MU	●	●	●	.500	.1875	.0313	.2031
CNMG433EMU	CNMG120412N-MU	●	●	●	.500	.1875	.0469	.2031
CNMG434EMU	CNMG120416N-MU	●	●	●	.500	.1875	.0625	.2031
CNMG542EMU	CNMG160608N-MU	●	●	●	.625	.250	.0313	.250
CNMG543EMU	CNMG160612N-MU	●	●	●	.625	.250	.0469	.250
CNMG544EMU	CNMG160616N-MU	●	●	●	.625	.250	.0625	.250
CNMG642EMU	CNMG190608N-MU	●	●	●	.750	.250	.0313	.3126
CNMG643EMU	CNMG190612N-MU	●	●	●	.750	.250	.0469	.3126
CNMG644EMU	CNMG190616N-MU	●	●	●	.750	.250	.0625	.3126
CNMG432EME	CNMG120408N-ME	●	●	●	.500	.1875	.0313	.2031
CNMG433EME	CNMG120412N-ME	●	●	●	.500	.1875	.0469	.2031
CNMG434EME	CNMG120416N-ME	●	●	●	.500	.1875	.0625	.2031
CNMG542EME	CNMG160608N-ME	●	●	●	.625	.250	.0313	.250
CNMG543EME	CNMG160612N-ME	●	●	●	.625	.250	.0469	.250
CNMG544EME	CNMG160616N-ME	●	●	●	.625	.250	.0625	.250
CNMG643EME	CNMG190612N-ME	●	●	●	.750	.250	.0469	.3126
CNMG644EME	CNMG190616N-ME	●	●	●	.750	.250	.0625	.3126
CNMG432EMX	CNMG120408N-MX		●	●	.500	.1875	.0313	.2031
CNMG433EMX	CNMG120412N-MX		●	●	.500	.1875	.0469	.2031
CNMG434EMX	CNMG120416N-MX		●	●	.500	.1875	.0625	.2031
CNMG542EMX	CNMG160608N-MX		●	●	.625	.250	.0313	.250
CNMG543EMX	CNMG160612N-MX		●	●	.625	.250	.0469	.250
CNMG544EMX	CNMG160616N-MX		●	●	.625	.250	.0625	.250
CNMG643EMX	CNMG190612N-MX		●	●	.750	.250	.0469	.3126
CNMG644EMX	CNMG190616N-MX		●	●	.750	.250	.0625	.3126

<b>CNMM 80° Diamond/Negative</b>								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CNMM432EHG	CNMM120408N-HG	★	●	●	.500	.1875	.0313	.2031
CNMM433EHG	CNMM120412N-HG	★	●	●	.500	.1875	.0469	.2031
CNMM543EHG	CNMM160612N-HG	★	●	●	.625	.250	.0469	.250
CNMM544EHG	CNMM160616N-HG	★	●	●	.625	.250	.0625	.250
CNMM643EHG	CNMM190608N-HG	★	●	●	.750	.250	.0313	.3126

● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

# Insert Availability - NEGATIVE

## CNMM 80° Diamond/Negative (continued)

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CNMM644EHG	CNMM190612N-HG	★	●	●	.750	.250	.0469	.3126
CNMM646EHG	CNMM190616N-HG	★	★	●	.750	.250	.0938	.3126
CNMM646ENP	CNMM190624N-MP		★	●	.750	.250	.0938	.3126

## DNMG 55° Diamond/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
DNMG431EFL	DNMG150404N-FL		●		.500	.1875	.0156	.2031
DNMG432EFL	DNMG150408N-FL		●		.500	.1875	.0313	.2031
DNMG431ESU	DNMG150404N-SU	●	●	●	.500	.1875	.0156	.2031
DNMG432ESU	DNMG150408N-SU	●	●	●	.500	.1875	.0313	.2031
DNMG433ESU	DNMG150412N-SU	●	●	●	.500	.1875	.0469	.2031
DNMG332ESE	DNMG110408N-SE	●	●		.375	.1875	.0313	.150
DNMG431ESE	DNMG150404N-SE	●	●		.500	.1875	.0156	.2031
DNMG432ESE	DNMG150408N-SE	●	●		.500	.1875	.0313	.2031
DNMG433ESE	DNMG150412N-SE	●	●		.500	.1875	.0469	.2031
DNMG431ELU	DNMG150404N-LU	●	●		.500	.1875	.0156	.2031
DNMG432ELU	DNMG150408N-LU	●	●		.500	.1875	.0313	.2031
DNMG433ELU	DNMG150412N-LU	●	●		.500	.1875	.0469	.2031
DNMG431ENK	DNMG150404N-SK		●		.500	.1875	.0156	.2031
DNMG432ENK	DNMG150408N-SK		●		.500	.1875	.0313	.2031
DNMG441ENK	DNMG150604N-SK		●		.500	.250	.0156	.2031
DNMG442ENK	DNMG150608N-SK		●		.500	.250	.0313	.2031
DNMG431ESX	DNMG150404N-SX	●	●	●	.500	.1875	.0156	.2031
DNMG432ESX	DNMG150408N-SX	●	●	●	.500	.1875	.0313	.2031
DNMG433ESX	DNMG150412N-SX	●	●	●	.500	.1875	.0469	.2031
DNMG431EUP	DNMG150404N-UP		●	●	.500	.1875	.0156	.2031
DNMG432EUP	DNMG150408N-UP		●	●	.500	.1875	.0313	.2031
DNMG433EUP	DNMG150412N-UP		●	●	.500	.1875	.0469	.2031
DNMG331EGU	DNMG110404N-GU		●	●	.375	.1875	.0156	.150
DNMG332EGU	DNMG110408N-GU		●	●	.375	.1875	.0313	.150
DNMG431EGU	DNMG150404N-GU	●	●	●	.500	.1875	.0156	.2031
DNMG432EGU	DNMG150408N-GU	●	●	●	.500	.1875	.0313	.2031
DNMG433EGU	DNMG150412N-GU	●	●	●	.500	.1875	.0469	.2031
DNMG442EGU	DNMG150608N-GU	★			.500	.250	.0313	.2031
DNMG332EUX	DNMG110408N-UX		●		.375	.125	.0313	.150
DNMG431EUX	DNMG150404N-UX	●	●	●	.500	.1875	.0156	.2031
DNMG432EUX	DNMG150408N-UX	●	●	●	.500	.1875	.0313	.2031
DNMG433EUX	DNMG150412N-UX	●	●	●	.500	.1875	.0469	.2031
DNMG443EUX	DNMG150612N-UX	★			.500	.250	.0469	.2031
DNMG431EGE	DNMG150404N-GE	★	●	●	.500	.1875	.0156	.2031
DNMG432EGE	DNMG150408N-GE	●	●	●	.500	.1875	.0313	.2031
DNMG433EGE	DNMG150412N-GE	●	●	●	.500	.1875	.0469	.2031
DNMG331ENG	DNMG110404N-UG		●	★	.375	.1875	.0156	.150
DNMG332ENG	DNMG110408N-UG		●	★	.375	.1875	.0313	.150
DNMG431ENG	DNMG150404N-UG	●	●	●	.500	.1875	.0156	.2031
DNMG432ENG	DNMG150408N-UG	●	●	●	.500	.1875	.0313	.2031
DNMG433ENG	DNMG150412N-UG	★	★		.500	.1875	.0469	.2031
DNMG542ENG	DNMG190608N-UG	●	●		.625	.250	.0313	.250
DNMG543ENG	DNMG190612N-UG	●	●		.625	.250	.0469	.250
DNMG431ENZ	DNMG150404N-UZ		●	●	.500	.1875	.0156	.2031
DNMG432ENZ	DNMG150408N-UZ		●	●	.500	.1875	.0313	.2031
DNMG433ENZ	DNMG150412N-UZ		●	●	.500	.1875	.0469	.2031
DNMG542ENZ	DNMG190608N-UZ	●	●		.625	.250	.0313	.250
DNMG543ENZ	DNMG190612N-UZ	●	●		.625	.250	.0469	.250
DNMG544ENZ	DNMG190616N-UZ	●	●		.625	.250	.0625	.250
DNMG432EMU	DNMG150408N-MU	●	●	●	.500	.1875	.0313	.2031
DNMG433EMU	DNMG150412N-MU	●	●	●	.500	.1875	.0469	.2031

● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

## DNMG 55° Diamond/Negative (continued)

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
DNMG434EMU	DNMG150416N-MU		★	★	.500	.1875	.0625	.2031
DNMG442EMU	DNMG150608N-MU	★	★	★	.500	.250	.0313	.2031
DNMG432EME	DNMG150408N-ME	●	●	●	.500	.1875	.0313	.2031
DNMG433EME	DNMG150412N-ME	●	●	●	.500	.1875	.0469	.2031
DNMG442EME	DNMG150608N-ME	●	●	●	.500	.250	.0313	.2031
DNMG443EME	DNMG150612N-ME	●	●	●	.500	.250	.0469	.2031
DNMG444EME	DNMG150616N-ME	●	●	●	.500	.250	.0625	.2031
DNMG432EMX	DNMG150408N-MX		●	●	.500	.1875	.0313	.2031
DNMG433EMX	DNMG150412N-MX		●	●	.500	.1875	.0469	.2031
DNMG434EMX	DNMG150416N-MX		●	●	.500	.1875	.0625	.2031

## DNMX 55° Diamond/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
DNMX431ESEW	DNMX150404N-SEW	●			.500	.1875	.0156	.2031
DNMX432ESEW	DNMX150408N-SEW	●	●		.500	.1875	.0313	.2031
DNMX433ESEW	DNMX150412N-SEW	●			.500	.1875	.0469	.2031

## RNMG Round/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
RNMG43ENT				●	.375	.1875	-	.2031
RNMG54ENU				●	.500	.250	-	.250
RNMG64ENV				●	.750	.250	-	.250
RNMG84ENY				●	1.000	.250	-	.3126
RNMG86ENY				●	1.000	.375	-	.3622

## SNMG 90° Square/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SNMG432EFL	SNMG120408N-FL		●		.500	.1875	.0313	.2031
SNMG432ESU	SNMG120408N-SU	●	●	●	.500	.1875	.0313	.2031
SNMG432ESE	SNMG120408N-SE	●	●	●	.500	.1875	.0313	.2031
SNMG433ESE	SNMG120412N-SE	●	●	●	.500	.1875	.0469	.2031
SNMG432ELU	SNMG120408N-LU	●	●		.500	.1875	.0313	.2031
SNMG433ELU	SNMG120412N-LU	●	★		.500	.1875	.0469	.2031
SNMG321ENK	SNMG090304N-SK		●		.375	.125	.0156	.150
SNMG322ENK	SNMG090308N-SK		●		.375	.125	.0313	.150
SNMG431ENK	SNMG120404N-SK		●		.500	.1875	.0156	.2031
SNMG432ENK	SNMG120408N-SK		●		.500	.1875	.0313	.2031
SNMG432ESX	SNMG120408N-SX	●	●	●	.500	.1875	.0313	.2031
SNMG433ESX	SNMG120412N-SX	●	●	●	.500	.1875	.0469	.2031
SNMG431EUP	SNMG120404N-UP		★	●	.500	.1875	.0156	.2031
SNMG432EUP	SNMG120408N-UP		●	●	.500	.1875	.0313	.2031
SNMG433EUP	SNMG120412N-UP		★	●	.500	.1875	.0469	.2031
SNMG321EGU	SNMG090304N-GU		●		.375	.125	.0156	.150
SNMG322EGU	SNMG090308N-GU		●	★	.375	.125	.0313	.150
SNMG431EGU	SNMG120404N-GU	●	●	●	.500	.1875	.0156	.2031
SNMG432EGU	SNMG120408N-GU	●	●	●	.500	.1875	.0313	.2031
SNMG433EGU	SNMG120412N-GU	●	●	●	.500	.1875	.0469	.2031
SNMG434EGU	SNMG120416N-GU		●	●	.500	.1875	.0625	.2031
SNMG543EGU	SNMG160612N-GU		●	●	.625	.250	.0469	.250
SNMG322EUX	SNMG090308N-UX		●		.375	.125	.0313	.150
SNMG431EUX	SNMG120404N-UX		●		.500	.1875	.0156	.2031
SNMG432EUX	SNMG120408N-UX	●	●	●	.500	.1875	.0313	.2031

● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

Insert Availability - **NEGATIVE**

**SNMG 90° Square/Negative (continued)**

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SNMG433EUX	SNMG120412N-UX		●	●	.500	.1875	.0469	.2031
SNMG434EUX	SNMG120416N-UX	★	●	●	.500	.1875	.0625	.2031
SNMG643EUX	SNMG190612N-UX	●	●	●	.750	.250	.0469	.3126
SNMG644EUX	SNMG190616N-UX	●	●	●	.750	.250	.0625	.3126
SNMG432EGE	SNMG120408N-GE	●	●	●	.500	.1875	.0313	.2031
SNMG433EGE	SNMG120412N-GE	●	●	●	.500	.1875	.0469	.2031
SNMG434EGE	SNMG120416N-GE	★	●	●	.500	.1875	.0625	.2031
SNMG322ENG	SNMG090308N-UG		●	●	.375	.125	.0313	.150
SNMG432ENG	SNMG120408N-UG		●	●	.500	.1875	.0313	.2031
SNMG433ENG	SNMG120412N-UG	★	★		.500	.1875	.0469	.2031
SNMG434ENG	SNMG120416N-UG		★		.500	.1875	.0625	.2031
SNMG543ENG	SNMG160612N-UG		●	●	.625	.250	.0469	.250
SNMG643ENG	SNMG190612N-UG		●	●	.750	.250	.0469	.3126
SNMG644ENG	SNMG190616N-UG		●	★	.750	.250	.0625	.3126
SNMG866ENG	SNMG250924N-UG		●	●	1.000	.375	.0938	.3622
SNMG432ENZ	SNMG120408N-NZ		●	●	.500	.1875	.0313	.2031
SNMG433ENZ	SNMG120412N-NZ		●	●	.500	.1875	.0469	.2031
SNMG434ENZ	SNMG120416N-NZ		●	●	.500	.1875	.0625	.2031
SNMG543ENZ	SNMG160612N-NZ		●	●	.625	.250	.0469	.250
SNMG544ENZ	SNMG160616N-NZ		●	●	.625	.250	.0625	.250
SNMG642ENZ	SNMG190608N-NZ		●	●	.750	.250	.0313	.3126
SNMG643ENZ	SNMG190612N-NZ		●	●	.750	.250	.0469	.3126
SNMG644ENZ	SNMG190616N-NZ		●	●	.750	.250	.0625	.3126
SNMG866ENZ	SNMG250924N-NZ		●	●	1.000	.375	.0938	.3622
SNMG432EMU	SNMG120408N-MU	●	●	●	.500	.1875	.0313	.2031
SNMG433EMU	SNMG120412N-MU	●	●	●	.500	.1875	.0469	.2031
SNMG434EMU	SNMG120416N-MU	●	●	●	.500	.1875	.0625	.2031
SNMG543EMU	SNMG160612N-MU	●	●	●	.625	.250	.0469	.250
SNMG544EMU	SNMG160616N-MU	●	●	●	.625	.250	.0625	.250
SNMG643EMU	SNMG190612N-MU	●	●	●	.750	.250	.0469	.3126
SNMG644EMU	SNMG190616N-MU	●	●	●	.750	.250	.0625	.3126
SNMG432EME	SNMG120408N-ME	●	●	●	.500	.1875	.0313	.2031
SNMG433EME	SNMG120412N-ME	●	●	●	.500	.1875	.0469	.2031
SNMG434EME	SNMG120416N-ME	●	●	●	.500	.1875	.0625	.2031
SNMG543EME	SNMG160612N-ME	●	●	●	.625	.250	.0469	.250
SNMG544EME	SNMG160616N-ME	●	●	●	.625	.250	.0625	.250
SNMG643EME	SNMG190612N-ME	●	●	●	.750	.250	.0469	.3126
SNMG644EME	SNMG190616N-ME	●	●	●	.750	.250	.0625	.3126
SNMG432EMX	SNMG120408N-MX		●	●	.500	.1875	.0313	.2031
SNMG433EMX	SNMG120412N-MX		●	●	.500	.1875	.0469	.2031
SNMG434EMX	SNMG120416N-MX		●	●	.500	.1875	.0625	.2031
SNMG543EMX	SNMG160612N-MX		●	●	.625	.250	.0469	.250
SNMG544EMX	SNMG160616N-MX		●	●	.625	.250	.0625	.250
SNMG643EMX	SNMG190612N-MX	●	●	●	.750	.250	.0469	.3126
SNMG644EMX	SNMG190616N-MX	●	●	●	.750	.250	.0625	.3126

**SNMM 90° Square/Negative**

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SNMM432EHG	SNMM120408N-HG	★	●	●	.500	.1875	.0313	.2031
SNMM433EHG	SNMM120412N-HG	★	●	●	.500	.1875	.0469	.2031
SNMM434EHG	SNMM120416N-HG	★	●	●	.500	.1875	.0625	.2031
SNMM643EHG	SNMM190612N-HG	★	●	●	.750	.250	.0469	.3126
SNMM644EHG	SNMM190616N-HG	★	●	●	.750	.250	.0625	.3126
SNMM646EHG	SNMM190616N-HG	★	●		.750	.250	.0938	.3126
SNMM643EHP	SNMM190612N-HP		★	●	.750	.250	.0469	.3126
SNMM644EHP	SNMM190616N-HP		★	★	.750	.250	.0625	.3126

**SNMM 90° Square/Negative (continued)**

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SNMM856EHP	SNMM250724N-HP	★	★	★	1.000	.3125	.0938	.3622
SNMM866EHP	SNMM250924N-HP	★	★		1.000	.375	.0938	.3622
SNMM644ENP	SNMM190616N-MP	★	●	●	.750	.250	.0625	.3126
SNMM856ENP	SNMM250724N-MP	★	★	★	1.000	.3125	.0938	.3622
SNMM866ENP	SNMM250924N-MP	★	★		1.000	.375	.0938	.3622

**TNMG 60° Triangle/Negative**

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TNMG331EFL	TNMG160404N-FL		●		.375	.1875	.0156	.150
TNMG332EFL	TNMG160408N-FL		●		.375	.1875	.0313	.150
TNMG321ESU	TNMG160304N-SU		●	●	.375	.125	.0156	.150
TNMG322ESU	TNMG160308N-SU		●	●	.375	.125	.0313	.150
TNMG331ESU	TNMG160404N-SU	●	●	●	.375	.1875	.0156	.150
TNMG332ESU	TNMG160408N-SU	●	●	●	.375	.1875	.0313	.150
TNMG333ESU	TNMG160412N-SU	●	●	●	.375	.1875	.0469	.150
TNMG331ESE	TNMG160404N-SE	●	●	★	.375	.1875	.0156	.150
TNMG332ESE	TNMG160408N-SE	●	●	●	.375	.1875	.0313	.150
TNMG333ESE	TNMG160412N-SE	●	●	●	.375	.1875	.0469	.150
TNMG431ESE	TNMG220404N-SE	●	★	★	.500	.1875	.0156	.2031
TNMG432ESE	TNMG220408N-SE	●	●		.500	.1875	.0313	.2031
TNMG433ESE	TNMG220412N-SE	●	●		.500	.1875	.0469	.2031
TNMG331ELU	TNMG160404N-LU	●	●		.375	.1875	.0156	.150
TNMG332ELU	TNMG160408N-LU	●	●		.375	.1875	.0313	.150
TNMG333ELU	TNMG160412N-LU	●	●		.375	.1875	.0469	.150
TNMG221ENK	TNMG110304N-SK		●		.250	.125	.0156	.089
TNMG321ENK	TNMG160304N-SK		●		.375	.125	.0156	.150
TNMG322ENK	TNMG160308N-SK		●		.375	.125	.0313	.150
TNMG331ENK	TNMG160404N-SK	●	●		.375	.1875	.0156	.150
TNMG332ENK	TNMG160408N-SK	●	●		.375	.1875	.0313	.150
TNMG431ENK	TNMG220404N-SK	●	●		.500	.1875	.0156	.2031
TNMG432ENK	TNMG220408N-SK	●	●		.500	.1875	.0313	.2031
TNMG321ESX	TNMG160304N-SX	●	●		.375	.125	.0156	.150
TNMG322ESX	TNMG160308N-SX	●	●		.375	.125	.0313	.150
TNMG331ESX	TNMG160404N-SX	●	●		.375	.1875	.0156	.150
TNMG332ESX	TNMG160408N-SX	●	●		.375	.1875	.0313	.150
TNMG431ESX	TNMG220404N-SX	●	●		.500	.1875	.0156	.2031
TNMG432ESX	TNMG220408N-SX	●	●		.500	.1875	.0313	.2031
TNMG433ESX	TNMG220412N-SX	●	●		.500	.1875	.0469	.2031
TNMG321EUX	TNMG160304N-UX		●		.375	.125	.0156	.150
TNMG322EUX	TNMG160308N-UX		●		.375	.125	.0313	.150
TNMG331EUX	TNMG160404N-UX	●	●		.375	.1875	.0156	.150
TNMG332EUX	TNMG160408N-UX	●	●		.375	.1875	.0313	.150
TNMG333EUX	TNMG160404N-UX	●	●		.375	.1875	.0469	.150
TNMG432EUX	TNMG220408N-UX	●	●		.500	.1875	.0313	.2031
TNMG433EUX	TNMG220412N-UX	●	●		.500	.1875	.0469	.2031
TNMG331EUP	TNMG160404N-UP		●	●	.375	.1875	.0156	.150
TNMG332EUP	TNMG160408N-UP		●	●	.375	.1875	.0313	.150
TNMG333EUP	TNMG160412N-UP		●	●	.375	.1875	.0469	.150
TNMG432EUP	TNMG220408N-UP		●	●	.500	.1875	.0313	.2031
TNMG433EUP	TNMG220412N-UP		★	●	.500	.1875	.0469	.2031
TNMG331EGU	TNMG160404N-GU	●	●		.375	.1875	.0156	.150
TNMG332EGU	TNMG160408N-GU	●	●		.375	.1875	.0313	.150
TNMG333EGU	TNMG160412N-GU	●	●		.375	.1875	.0469	.150
TNMG334EGU	TNMG160416N-GU	●	★		.375	.1875	.0625	.150
TNMG431EGU	TNMG220404N-GU	●	●		.500	.1875	.0156	.2031
TNMG432EGU	TNMG220408N-GU	●	●		.500	.1875	.0313	.2031

● = USA Stocked item

★ = Worldwide Warehouse Stocked item

● = USA Stocked item

★ = Worldwide Warehouse Stocked item

# Insert Availability - *NEGATIVE*

## TNMG 60° Triangle/Negative (continued)

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TNMG433EGU	TNMG220412N-GU	●	●	●	.500	.1875	.0469	.2031
TNMG331EGE	TNMG160404N-GE	●	●	●	.375	.1875	.0156	.150
TNMG332EGE	TNMG160408N-GE	●	●	●	.375	.1875	.0313	.150
TNMG333EGE	TNMG160412N-GE	●	●	●	.375	.1875	.0469	.150
TNMG432EGE	TNMG220408N-GE	●	●	●	.500	.1875	.0313	.2031
TNMG321ENG	TNMG160304N-UG	●	●	●	.375	.125	.0156	.150
TNMG322ENG	TNMG160308N-UG	●	●	●	.375	.125	.0313	.150
TNMG331ENG	TNMG160404N-UG	★	★	●	.375	.1875	.0156	.150
TNMG332ENG	TNMG160408N-UG	●	●	●	.375	.1875	.0313	.150
TNMG333ENG	TNMG160412N-UG	★	★	●	.375	.1875	.0469	.150
TNMG334ENG	TNMG160416N-UG	★	★	●	.375	.1875	.0625	.150
TNMG432ENG	TNMG220408N-UG	●	●	●	.500	.1875	.0313	.2031
TNMG433ENG	TNMG220412N-UG	●	★	●	.500	.1875	.0469	.2031
TNMG434ENG	TNMG220416N-UG	●	●	●	.500	.1875	.0625	.2031
TNMG542ENG	TNMG270608N-UG	●	●	●	.625	.250	.0313	.250
TNMG543ENG	TNMG270612N-UG	●	●	●	.625	.250	.0469	.250
TNMG544ENG	TNMG270616N-UG	●	●	●	.625	.250	.0625	.250
TNMG666ENG	TNMG330924N-UG	●	●	●	.750	.375	.0938	.3126
TNMG322ENZ	TNMG160308N-UZ	●	●	●	.375	.125	.0313	.150
TNMG323ENZ	TNMG160312N-UZ	●	●	●	.375	.125	.0469	.150
TNMG332ENZ	TNMG160408N-UZ	●	●	●	.375	.1875	.0313	.150
TNMG333ENZ	TNMG160412N-UZ	●	●	●	.375	.1875	.0469	.150
TNMG432ENZ	TNMG220408N-UZ	●	●	●	.500	.1875	.0313	.2031
TNMG433ENZ	TNMG220412N-UZ	●	●	●	.500	.1875	.0469	.2031
TNMG434ENZ	TNMG220416N-UZ	●	●	●	.500	.1875	.0625	.2031
TNMG444ENZ	TNMG220616N-UZ	●	●	●	.500	.1875	.0625	.2031
TNMG542ENZ	TNMG270608N-UZ	●	●	●	.625	.250	.0313	.250
TNMG543ENZ	TNMG270612N-UZ	●	●	●	.625	.250	.0469	.250
TNMG544ENZ	TNMG270616N-UZ	●	●	●	.625	.250	.0625	.250
TNMG548ENZ	TNMG270632N-UZ	●	●	●	.625	.250	.125	.250
TNMG666ENZ	TNMG330924N-UZ	●	●	●	.750	.375	.0938	.3126
TNMG332EMU	TNMG160408N-MU	●	●	●	.375	.1875	.0313	.150
TNMG333EMU	TNMG160412N-MU	●	●	●	.375	.1875	.0469	.150
TNMG432EMU	TNMG220408N-MU	●	●	●	.500	.1875	.0313	.2031
TNMG433EMU	TNMG220412N-MU	●	●	●	.500	.1875	.0469	.2031
TNMG434EMU	TNMG220416N-MU	●	●	●	.500	.1875	.0625	.2031
TNMG543EMU	TNMG270612N-MU	●	●	●	.625	.250	.0469	.250
TNMG544EMU	TNMG270616N-MU	●	●	●	.625	.250	.0625	.250
TNMG332EME	TNMG160408N-ME	●	●	●	.375	.1875	.0313	.150
TNMG333EME	TNMG160412N-ME	●	●	●	.375	.1875	.0469	.150
TNMG432EME	TNMG220408N-ME	●	●	●	.500	.1875	.0313	.2031
TNMG433EME	TNMG220412N-ME	●	●	●	.500	.1875	.0469	.2031
TNMG434EME	TNMG220416N-ME	●	●	●	.500	.1875	.0625	.2031
TNMG332EMX	TNMG160408N-MX	●	●	●	.375	.1875	.0313	.150
TNMG333EMX	TNMG160412N-MX	●	●	●	.375	.1875	.0469	.150
TNMG432EMX	TNMG220408N-MX	●	●	●	.500	.1875	.0313	.2031
TNMG433EMX	TNMG220412N-MX	●	●	●	.500	.1875	.0469	.2031

## TNMM 60° Triangle/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TNMM432EHG	TNMM220408N-HG	●	●	●	.500	.1875	.0313	.2031
TNMM433EHG	TNMM220412N-HG	●	●	●	.500	.1875	.0469	.2031
TNMM434EHG	TNMM220416N-HG	●	●	●	.500	.1875	.0625	.2031
TNMM332ENP	TNMM160408N-MP	●	●	●	.375	.1875	.0313	.150

## TRM 55° Triangle/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TRM551704LU	TRM551704-LU	★	●	★	.394	.197	.0156	.084
TRM551708LU	TRM551708-LU	★	●	★	.394	.197	.0313	.084
TRM551712LU	TRM551712-LU	★	●	★	.394	.197	.0469	.084
TRM551704GU	TRM551704-GU	★	●	★	.394	.197	.0156	.084
TRM551708GU	TRM551708-GU	★	●	★	.394	.197	.0313	.084
TRM551712GU	TRM551712-GU	★	●	★	.394	.197	.0469	.084

## VNMG 35° Diamond/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
VNMG331EFL	VNMG160404N-FL	●	●	●	.375	.1875	.0156	.150
VNMG332EFL	VNMG160408N-FL	●	●	●	.375	.1875	.0313	.150
VNMG331ESU	VNMG160404N-SU	●	●	●	.375	.1875	.0156	.150
VNMG332ESU	VNMG160408N-SU	●	●	●	.375	.1875	.0313	.150
VNMG331ESE	VNMG160404N-SE	●	●	★	.375	.1875	.0156	.150
VNMG332ESE	VNMG160408N-SE	●	●	★	.375	.1875	.0313	.150
VNMG331ELU	VNMG160404N-LU	●	●	●	.375	.1875	.0156	.150
VNMG332ELU	VNMG160408N-LU	●	●	●	.375	.1875	.0313	.150
VNMG331ESX	VNMG160404N-SX	●	●	●	.375	.1875	.0156	.150
VNMG332ESX	VNMG160408N-SX	●	●	●	.375	.1875	.0313	.150
VNMG331EUP	VNMG160404N-UP	●	●	●	.375	.1875	.0156	.150
VNMG332EUP	VNMG160408N-UP	●	●	●	.375	.1875	.0313	.150
VNMG331EGU	VNMG160404N-GU	●	●	●	.375	.1875	.0156	.150
VNMG332EGU	VNMG160408N-GU	●	●	●	.375	.1875	.0313	.150
VNMG333EGU	VNMG160412N-GU	●	●	★	.375	.1875	.0469	.150
VNMG331EUX	VNMG160404N-UX	●	●	●	.375	.1875	.0156	.150
VNMG332EUX	VNMG160408N-UX	●	●	●	.375	.1875	.0313	.150
VNMG333EUX	VNMG160412N-UX	●	●	★	.375	.1875	.0469	.150
VNMG331EGE	VNMG160404N-GE	●	●	●	.375	.1875	.0156	.150
VNMG332EGE	VNMG160408N-GE	●	●	●	.375	.1875	.0313	.150
VNMG333EGE	VNMG160412N-GE	●	●	★	.375	.1875	.0469	.150
VNMG331ENG	VNMG160404N-UG	●	●	●	.375	.1875	.0156	.150
VNMG332ENG	VNMG160408N-UG	●	●	●	.375	.1875	.0313	.150
VNMG331ENZ	VNMG160404N-UZ	●	●	●	.375	.1875	.0156	.150
VNMG332ENZ	VNMG160408N-UZ	●	●	●	.375	.1875	.0313	.150
VNMG333ENZ	VNMG160412N-UZ	●	●	●	.375	.1875	.0469	.150
VNMG432ENZ	VNMG220408N-UZ	●	●	●	.500	.1875	.0313	.2031
VNMG433ENZ	VNMG220412N-UZ	●	●	●	.500	.1875	.0469	.2031

## WNMG 80° Trigon/Negative

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
WNMG431EFL	WNMG080404N-FL	●	●	●	.500	.1875	.0156	.2031
WNMG432EFL	WNMG080408N-FL	●	●	●	.500	.1875	.0313	.2031
WNMG331ESU	WNMG060404N-SU	●	●	●	.375	.1875	.0156	.150
WNMG332ESU	WNMG060408N-SU	●	●	●	.375	.1875	.0313	.150
WNMG431ESU	WNMG080404N-SU	●	●	●	.500	.1875	.0156	.2031
WNMG432ESU	WNMG080408N-SU	●	●	●	.500	.1875	.0313	.2031
WNMG433ESU	WNMG080412N-SU	●	●	●	.500	.1875	.0469	.2031
WNMG431ESE	WNMG080404N-SE	●	●	★	.500	.1875	.0156	.2031
WNMG432ESE	WNMG080408N-SE	●	●	●	.500	.1875	.0313	.2031
WNMG433ESE	WNMG080412N-SE	●	●	●	.500	.1875	.0469	.2031
WNMG432ESEW	WNMG080408N-SEW	●	●	●	.500	.1875	.0313	.2031
WNMG433ESEW	WNMG080412N-SEW	●	●	●	.500	.1875	.0469	.2031
WNMG431ELU	WNMG080404N-SU	●	●	●	.500	.1875	.0156	.2031
WNMG432ELU	WNMG080408N-SU	●	●	★	.500	.1875	.0313	.2031

● = USA Stocked item

★ = Worldwide Warehouse Stocked item

● = USA Stocked item

★ = Worldwide Warehouse Stocked item



Insert Availability - POSITIVE

WNMG 80° Trigon/Negative (continued)								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
WNMG433ELU	WNMG080412N-SU	●	●		.500	.1875	.0469	.2031
WNMG331ELUW	WNMG060404N-LUW	●	●		.375	.1875	.0156	.150
WNMG332ELUW	WNMG060408N-LUW	●	●		.375	.1875	.0313	.150
WNMG431ELUW	WNMG080404N-LUW	●	●		.500	.1875	.0156	.2031
WNMG432ELUW	WNMG080408N-LUW	●	●		.500	.1875	.0313	.2031
WNMG433ELUW	WNMG080412N-LUW	●	●		.500	.1875	.0469	.2031
WNMG431ENK	WNMG080404N-SK		●		.500	.1875	.0156	.2031
WNMG432ENK	WNMG080408N-SK		●		.500	.1875	.0313	.2031
WNMG431ESX	WNMG080404N-SX	●	●	●	.500	.1875	.0156	.2031
WNMG432ESX	WNMG080408N-SX	●	●	●	.500	.1875	.0313	.2031
WNMG433ESX	WNMG080412N-SX	●	●	●	.500	.1875	.0469	.2031
WNMG432EUP	WNMG080408N-UP		●		.500	.1875	.0313	.2031
WNMG433EUP	WNMG080412N-UP		●		.500	.1875	.0469	.2031
WNMG332EGU	WNMG060408N-GU		●		.375	.1875	.0313	.150
WNMG333EGU	WNMG060412N-GU		●		.375	.1875	.0469	.150
WNMG431EGU	WNMG080404N-GU	●	●	●	.500	.1875	.0156	.2031
WNMG432EGU	WNMG080408N-GU	●	●	●	.500	.1875	.0313	.2031
WNMG433EGU	WNMG080412N-GU	●	●	●	.500	.1875	.0469	.2031
WNMG432EGUW	WNMG080408N-GUW	●	●		.500	.1875	.0313	.2031
WNMG433EGUW	WNMG080412N-GUW	●	●		.500	.1875	.0469	.2031
WNMG431EUX	WNMG080404N-UX	●	●	●	.500	.1875	.0156	.2031
WNMG432EUX	WNMG080408N-UX	●	●	●	.500	.1875	.0313	.2031
WNMG433EUX	WNMG080412N-UX	●	●	●	.500	.1875	.0469	.2031
WNMG332EGE	WNMG060408N-GE		●	●	.375	.1875	.0313	.150
WNMG333EGE	WNMG060412N-GE		●	●	.375	.1875	.0469	.150
WNMG432EGE	WNMG080408N-GE	●	●	●	.500	.1875	.0313	.2031
WNMG433EGE	WNMG080412N-GE	●	●	●	.500	.1875	.0469	.2031
WNMG434EGE	WNMG080416N-GE		●	●	.500	.1875	.0625	.2031
WNMG431ENG	WNMG080404N-UG		●	●	.500	.1875	.0156	.2031
WNMG432ENG	WNMG080408N-UG		●	●	.500	.1875	.0313	.2031
WNMG433ENG	WNMG080412N-UG		●	●	.500	.1875	.0469	.2031
WNMG543ENG	WNMG100612N-UG		●	●	.625	.250	.0469	.250
WNMG431ENZ	WNMG080404N-NZ		●	●	.500	.1875	.0156	.2031
WNMG432ENZ	WNMG080408N-NZ		●	●	.500	.1875	.0313	.2031
WNMG433ENZ	WNMG080412N-NZ		●	●	.500	.1875	.0469	.2031
WNMG332EMU	WNMG060408N-MU	●	●	●	.375	.1875	.0313	.150
WNMG333EMU	WNMG060412N-MU	●	●	●	.375	.1875	.0469	.150
WNMG432EMU	WNMG080408N-MU	●	●	●	.500	.1875	.0313	.2031
WNMG433EMU	WNMG080412N-MU	●	●	●	.500	.1875	.0469	.2031
WNMG543EMU	WNMG100612N-MU	●	●	●	.625	.250	.0469	.250
WNMG332EME	WNMG060408N-ME	●	●	●	.375	.1875	.0313	.150
WNMG333EME	WNMG060412N-ME	●	●	●	.375	.1875	.0469	.150
WNMG432EME	WNMG080408N-ME	●	●	●	.500	.1875	.0313	.2031
WNMG433EME	WNMG080412N-ME	●	●	●	.500	.1875	.0469	.2031
WNMG543EME	WNMG100612N-ME	●	●	●	.625	.250	.0469	.250
WNMG432EMX	WNMG080408N-MX		●	●	.500	.1875	.0313	.2031
WNMG433EMX	WNMG080412N-MX		●	●	.500	.1875	.0469	.2031

Insert Availability - POSITIVE

CCMT 80° Diamond/7° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CCMT21.50.5ESU	CCMT060202N-SU		●	●	.250	.094	.0078	.110
CCMT21.51ESU	CCMT060204N-SU	●	●	●	.250	.094	.0156	.110
CCMT21.52ESU	CCMT060208N-SU	●	●	●	.250	.094	.0313	.110
CCMT32.50.5ESU	CCMT09T302N-SU	●	●	●	.375	.156	.0078	.1732

● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

CCMT 80° Diamond/7° Positive (continued)								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CCMT32.51ESU	CCMT09T304N-SU	●	●	●	.375	.156	.0156	.1732
CCMT32.52ESU	CCMT09T308N-SU	●	●	●	.375	.156	.0313	.1732
CCMT431ESU	CCMT120404N-SU		●	●	.500	.1875	.0156	.2165
CCMT432ESU	CCMT120408N-SU	●	●	●	.500	.1875	.0313	.2165
CCMT21.50.5ELU	CCMT060202N-LU	●	●		.250	.094	.0078	.110
CCMT21.51ELU	CCMT060204N-LU	●	●		.250	.094	.0156	.110
CCMT32.51ELU	CCMT09T304N-LU	●	●		.375	.156	.0156	.1732
CCMT32.52ELU	CCMT09T308N-LU	●	●		.375	.156	.0313	.1732
CCMT32.51ELUW	CCMT09T304N-LUW	●	●		.375	.156	.0156	.1732
CCMT32.52ELUW	CCMT09T308N-LUW	●	●		.375	.156	.0313	.1732
CCMT21.51ENK	CCMT060204N-SK		●	●	.250	.094	.0156	.110
CCMT21.52ENK	CCMT060208N-SK		●	●	.250	.094	.0313	.110
CCMT32.51ENK	CCMT09T304N-SK		●	●	.375	.156	.0156	.1732
CCMT32.52ENK	CCMT09T308N-SK		●	●	.375	.156	.0313	.1732
CCMT431ENK	CCMT120404N-SK		●	●	.500	.1875	.0156	.2165
CCMT432ENK	CCMT120408N-SK		●	●	.500	.1875	.0313	.2165
CCMT32.51EMU	CCMT09T304N-MU	●	●		.375	.156	.0156	.1732
CCMT32.52EMU	CCMT09T308N-MU	●	●	●	.375	.156	.0313	.1732
CCMT21.51EFM	CCMT060204N-SC		●		.250	.094	.0156	.110
CCMT322EFM	CCMT090308N-SC		●		.375	.125	.0313	.1732

CPMT 80° Diamond/11° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
CPMT2.51.51ESU	CPMT080204N-SU	★	●	★	.3125	.094	.0156	.134
CPMT2.51.52ESU	CPMT080208N-SU	★	●	★	.3125	.094	.0313	.134
CPMT21.51ESU	CPMT060204N-SU	●	●		.250	.094	.0156	.110
CPMT21.52ESU	CPMT060208N-SU	●	●		.250	.094	.0313	.110
CPMT32.51ESU	CPMT09T304N-SU	●	●	●	.375	.156	.0156	.1732
CPMT32.52ESU	CPMT09T308N-SU	●	●	●	.375	.156	.0313	.1732
CPMT21.51ESU	CPMT090304N-SU		●		.375	.156	.0156	.1732
CPMT322ESU	CPMT090308N-SU		●		.375	.125	.0313	.1732
CPMT321ELU	CPMT090304N-LU	★	●		.375	.156	.0156	.1732
CPMT322ELU	CPMT090308N-LU	★			.375	.125	.0313	.1732
CPMT321ELUW	CPMT090304N-LUW	★	★	★	.375	.156	.0156	.1732
CPMT322ELUW	CPMT090308N-LUW	★	★	★	.375	.125	.0313	.1732
CPMT21.51EMU	CPMT060204N-MU		●		.250	.094	.0156	.110
CPMT21.52EMU	CPMT060208N-MU		●		.250	.094	.0313	.110
CPMT321EMU	CPMT090304N-MU	★	●		.375	.156	.0156	.1732
CPMT322EMU	CPMT090308N-MU	★	●		.375	.125	.0313	.1732

DCMT 55° Diamond/7° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
DCMT21.50.5ELU	DCMT070202N-LU	●	●		.250	.094	.0078	.110
DCMT21.51ELU	DCMT070204N-LU	●	●		.250	.094	.0156	.110
DCMT32.50.5ELU	DCMT11T302N-LU		●	●	.375	.156	.0078	.1732
DCMT32.51ELU	DCMT11T304N-LU	●	●		.375	.156	.0156	.1732
DCMT32.52ELU	DCMT11T308N-LU	●	●		.375	.156	.0313	.1732
DCMT21.50.5ESU	DCMT070202N-SU		●	●	.250	.094	.0078	.110
DCMT21.51ESU	DCMT070204N-SU	●	●	●	.250	.094	.0156	.110
DCMT21.52ESU	DCMT070208N-SU	●	●	●	.250	.094	.0313	.110
DCMT32.50.5ESU	DCMT11T302N-SU		●	●	.375	.156	.0078	.1732
DCMT32.51ESU	DCMT11T304N-SU	●	●	●	.375	.156	.0156	.1732
DCMT32.52ESU	DCMT11T308N-SU	●	●	●	.375	.156	.0313	.1732

● = USA Stocked item  
★ = Worldwide Warehouse Stocked item

# Insert Availability - POSITIVE

DCMT 55° Diamond/7° Positive (continued)								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
DCMT21.51ENK	DCMT070204N-SK		●	●	.250	.094	.0156	.110
DCMT32.51ENK	DCMT11T304N-SK		●	●	.375	.156	.0156	.1732
DCMT32.52ENK	DCMT11T308N-SK		●	●	.375	.156	.0313	.1732
DCMT32.51EMU	DCMT11T304N-MU	●	●		.375	.156	.0156	.1732
DCMT32.52EMU	DCMT11T308N-MU	●	●	●	.375	.156	.0313	.1732
DPMT 55° Diamond/11° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
DPMT21.51ESU	DPMT070204N-SU		●		.250	.094	.0156	.110
DPMT32.51ESU	DPMT11T304N-SU		●		.375	.156	.0156	.1732
DPMT32.52ESU	DPMT11T308N-SU		●		.375	.156	.0313	.1732
RCMT Round/7° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
RCMT100300RX	RCMT1003MON-RX	●	●	●	.394	.125	-	.1417
RCMT120400RX	RCMT1204MON-RX	●	●	●	.472	.1875	-	.1654
RCMT160600RX	RCMT1606MON-RX	●	●	●	.630	.250	-	.2047
RCMT200600RX	RCMT2006MON-RX	●	●	●	.787	.250	-	.2559
RCMT250700RX	RCMT2507MON-RX	●	●	●	.984	.313	-	.2835
RCMX Round/7° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
RCMX100300	RCMX1003MON-RP	●	●	●	.394	.125	-	.1417
RCMX120400	RCMX1204MON-RP	●	●	●	.472	.1875	-	.1654
RCMX160600	RCMX1606MON-RP	●	●	●	.630	.250	-	.2047
RCMX200600	RCMX2006MON-RP	●	●	●	.787	.250	-	.2559
RCMX250700	RCMX2507MON-RP	●	●	●	.984	.313	-	.2835
SCMT 90° Square/7° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SCMT32.51ESU	SCMT09T304N-SU	●	●	●	.375	.156	.0156	.1732
SCMT32.52ESU	SCMT09T308N-SU	●	●	●	.375	.156	.0313	.1732
SCMT431ESU	SCMT120404N-SU	●	●		.500	.1875	.0156	.2165
SCMT432ESU	SCMT120408N-SU		●	★	.500	.1875	.0313	.2165
SCMT32.51ELU	SCMT09T304N-LU	●	●		.375	.156	.0156	.1732
SCMT32.52ELU	SCMT09T308N-LU	●	●		.375	.156	.0313	.1732
SCMT32.51ENK	SCMT09T304N-SK		●	●	.375	.156	.0156	.1732
SCMT32.52ENK	SCMT09T308N-SK		●	●	.375	.156	.0313	.1732
SCMT431ENK	SCMT120404N-SK		●	●	.500	.1875	.0156	.2165
SCMT432ENK	SCMT120408N-SK		●	●	.500	.1875	.0313	.2165
SCMT433ENK	SCMT120412N-SK		●	●	.500	.1875	.0469	.2165
SCMT32.52EMU	SCMT09T308N-MU	★	●		.375	.156	.0313	.1732
SCMT432EMU	SCMT120408N-MU	★	★		.500	.1875	.0313	.2165

● = USA Stocked item

★ = Worldwide Warehouse Stocked item

SPG 90° Square/11° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SPG422	SPGN120308		●		.500	.125	.0313	-
SPG423	SPGN120312		●		.500	.125	.0469	-
SPG432	SPGN120408		●		.500	.1875	.0313	-
SPG433	SPGN120412		●		.500	.1875	.0469	-
SPG632	SPGN190408		●		.750	.1875	.0313	-
SPG633	SPGN190412		●		.750	.1875	.0469	-
SPG634	SPGN190416		●		.750	.1875	.0625	-
SPMN 90° Square/11° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SPMN322	SPMN090308		●		.375	.125	.0313	-
SPMN421	SPMN120304		●		.500	.125	.0156	-
SPMN422	SPMN120308		●		.500	.125	.0313	-
SPMN634	SPMN190416		●		.750	.1875	.0625	-
SPMT 90° Square/11° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SPMT322ELU	SPMT090308N-LU	★	★		.375	.125	.0313	.130
SPMT321ENF	SPMT090304N-SF		●	●	.375	.125	.0156	.130
SPMT322ENF	SPMT090308N-SF		●	●	.375	.125	.0313	.130
SPMR 90° Square/11° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
SPMR321ENF	SPMR090304N-SF		●	●	.375	.125	.0156	-
SPMR322ENF	SPMR090308N-SF		●	●	.375	.125	.0313	-
SPMR421ENF	SPMR120304N-SF		●	●	.500	.125	.0156	-
SPMR422ENF	SPMR120308N-SF		●	●	.500	.125	.0313	-
SPMR423ENF	SPMR120312N-SF		●	●	.500	.125	.0469	-
TBGT 60° Triangle/5° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TBGT520.5L	TBGT060102L-W		●		.156	.0625	.0078	.090
TBGT521L	TBGT060104L-W		●		.156	.0625	.0156	.090
TBGT520.5LFX	TBGT060102L-FX		●		.156	.0625	.0078	.090
TBGT521LFX	TBGT060104L-FX		●		.156	.0625	.0156	.090
TCMT 60° Triangle/7° Positive								
Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TCMT21.51ESU	TCMT110204N-SU	●	●	●	.250	.094	.0156	.110
TCMT21.52ESU	TCMT110208N-SU	●	●		.250	.094	.0313	.110
TCMT32.51ESU	TCMT16T304N-SU	●	●		.375	.156	.0156	.1693
TCMT32.52ESU	TCMT16T308N-SU	●	●	●	.375	.156	.0313	.1693
TCMT21.51ELU	TCMT110204N-LU	●	●		.250	.094	.0156	.110
TCMT21.52ELU	TCMT110208N-LU	●	●		.250	.094	.0313	.110

● = USA Stocked item

★ = Worldwide Warehouse Stocked item

## Insert Availability - POSITIVE

### TCMT 60° Triangle/7° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TCMT21.51ENK	TCMT110204N-SK	●	●	●	.250	.094	.0156	.110
TCMT21.52ENK	TCMT110208N-SK	●	●	●	.250	.094	.0313	.110
TCMT32.51ENK	TCMT16T304N-SK	●	●	●	.375	.156	.0156	.1693
TCMT32.52ENK	TCMT16T308N-SK	●	●	●	.375	.156	.0313	.1693
TCMT32.53ENK	TCMT16T312N-SK	●	●	●	.375	.156	.0469	.1693

### TPG 60° Triangle/11° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TPG221	TPGN110304	●	●	●	.250	.125	.0156	-
TPG222	TPGN110308	●	●	●	.250	.125	.0313	-
TPG321	TPGN160304	●	●	●	.375	.125	.0156	-
TPG322	TPGN160308	●	●	●	.375	.125	.0313	-
TPG323	TPGN160312	●	●	●	.375	.125	.0469	-
TPG324	TPGN160316	●	●	●	.375	.125	.0625	-
TPG332	TPGN160408	●	●	●	.375	.1875	.0313	-
TPG431	TPGN220404	●	●	●	.500	.1875	.0156	-
TPG432	TPGN220408	●	●	●	.500	.1875	.0313	-
TPG433	TPGN220412	●	●	●	.500	.1875	.0469	-
TPG434	TPGN220416	●	●	●	.500	.1875	.0625	-
TPG436	TPGN220424	●	●	●	.500	.1875	.0938	-

### TPMN 60° Triangle/11° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TPMN321	TPMN160304	●	●	●	.375	.125	.0156	-
TPMN322	TPMN160308	●	●	●	.375	.125	.0313	-
TPMN432	TPMN220408	●	●	●	.500	.1875	.0313	-
TPMN433	TPMN220412	●	●	●	.750	.1875	.0469	-

### TPMT 60° Triangle/11° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TPMT1.81.50.5ESU	TPMT090202N-SU	●	●	●	.219	.094	.0078	.102
TPMT1.81.51ESU	TPMT090204N-SU	●	●	●	.219	.094	.0156	.102
TPMT21.50.5ESU	TPMT110202N-SU	●	●	●	.250	.094	.0078	.107
TPMT21.51ESU	TPMT110204N-SU	●	●	●	.250	.094	.0156	.107
TPMT21.52ESU	TPMT110208N-SU	●	●	●	.250	.094	.0313	.107
TPMT220.5ESU	TPMT110302N-SU	●	●	★	.250	.125	.0078	.130
TPMT221ESU	TPMT110304N-SU	●	●	★	.250	.125	.0156	.130
TPMT222ESU	TPMT110308N-SU	●	●	★	.250	.125	.0313	.130
TPMT32.51ESU	TPMT16T304N-SU	●	●	●	.375	.156	.0156	.1693
TPMT32.52ESU	TPMT16T308N-SU	●	●	●	.375	.156	.0313	.1693
TPMT331ESU	TPMT160404N-SU	●	●	★	.375	.1875	.0156	.1693
TPMT332ESU	TPMT160408N-SU	●	●	★	.375	.1875	.0313	.1693
TPMT1.81.50.5ELU	TPMT090202N-LU	●	●	●	.219	.094	.0078	.102
TPMT1.81.51ELU	TPMT090204N-LU	●	●	●	.219	.094	.0156	.102
TPMT221ELU	TPMT110304N-LU	●	●	●	.250	.125	.0156	.130
TPMT222ELU	TPMT110308N-LU	●	●	●	.250	.125	.0313	.130
TPMT221ENF	TPMT110304N-SF	●	●	●	.250	.125	.0156	.130
TPMT222ENF	TPMT110308N-SF	●	●	●	.250	.125	.0313	.130
TPMT331ENF	TPMT160404N-SF	●	●	●	.375	.1875	.0156	.1693
TPMT332ENF	TPMT160408N-SF	●	●	●	.375	.1875	.0313	.1693
TPMT221EMU	TPMT110304N-MU	●	●	●	.250	.125	.0156	.130

### TPMT 60° Triangle/11° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TPMT222EMU	TPMT110308N-MU	●	●	●	.250	.125	.0313	.130
TPMT331EMU	TPMT160404N-MU	●	●	●	.375	.1875	.0156	.1693
TPMT332EMU	TPMT160408N-MU	●	●	●	.375	.1875	.0313	.1693

### TPMR 60° Triangle/11° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
TPMR221ENF	TPMR110304N-SF	●	●	●	.250	.125	.0156	-
TPMR222ENF	TPMR110308N-SF	●	●	●	.250	.125	.0313	-
TPMR321ENF	TPMR160304N-SF	●	●	●	.375	.125	.0156	-
TPMR322ENF	TPMR160308N-SF	●	●	●	.375	.125	.0313	-
TPMR323ENF	TPMR160312N-SF	●	●	●	.375	.125	.0469	-
TPMR432ENF	TPMR220408N-SF	●	●	●	.500	.1875	.0313	-
TPMR433ENF	TPMR220412N-SF	●	●	●	.500	.1875	.0469	-

### VBMT 35° Diamond/5° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
VBMT221ESU	VBMT110304N-SU	●	●	●	.250	.125	.0156	.134
VBMT222ESU	VBMT110308N-SU	●	●	●	.250	.125	.0313	.134
VBMT331ESU	VBMT160404N-SU	●	●	●	.375	.1875	.0156	.1732
VBMT332ESU	VBMT160408N-SU	●	●	●	.375	.1875	.0313	.1732
VBMT221ELU	VBMT110304N-LU	●	★	●	.250	.125	.0156	.134
VBMT331ELU	VBMT160404N-LU	●	★	●	.375	.1875	.0156	.1732
VBMT332ELU	VBMT160408N-LU	●	★	●	.375	.1875	.0313	.1732
VBMT332ENK	VBMT160408N-SK	●	●	●	.375	.1875	.0313	.1732

### VCMT 35° Diamond/7° Positive

Sumitomo Catalog Number	ISO Catalog Number	AC810P	AC820P	AC830P	Inscribed Circle	Thickness	Nose Radius	Insert Hole Diameter
VCMT331ESU	VCMT160404N-SU	●	●	●	.375	.1875	.0156	.1732
VCMT332ESU	VCMT160408N-SU	●	●	●	.375	.1875	.0313	.1732
VCMT331ELU	VCMT160404N-LU	●	●	●	.375	.1875	.0156	.1732
VCMT332ELU	VCMT160408N-LU	●	●	●	.375	.1875	.0313	.1732
VCMT331ENK	VCMT160404N-SK	●	●	●	.375	.1875	.0156	.1732
VCMT332ENK	VCMT160408N-SK	●	●	●	.375	.1875	.0313	.1732

### Cut-off inserts - General Steel - Neutral

Sumitomo Catalog Number	AC830P	W
WCFN2T	●	.0787
WCFR2T	●	
WCFL2T	●	
WCFN3	●	.1181
WCFR3	●	
WCFL3	●	
WCFN4	●	.1575
WCFR4	●	
WCFL4	●	
WCFN5	●	.1969
WCFR5	●	
WCFL5	●	

● = USA Stocked item

★ = Worldwide Warehouse Stocked item

● = USA Stocked item

★ = Worldwide Warehouse Stocked item



# SUMITOMO

**CARBIDE - CBN - DIAMOND**

## **Sumitomo Electric Carbide, Inc.**

### **Headquarters**

1001 Business Center Drive  
Mount Prospect, IL 60056-2181  
P.O. Box 545, Mt. Prospect, IL 60056-0545  
Phone: (800) 950-5202  
Phone: (847) 635-0044  
Fax: (847) 635-7866  
<http://www.sumicarbide.com>

### **Detroit Branch**

14496 Sheldon Road #230  
Plymouth, MI 48170  
Phone: (800) 239-5177  
Phone: (734) 451-0200  
Fax: (734) 451-5338

### **Cincinnati Branch**

4450 Carver Woods Drive  
Cincinnati, OH 45242-5545  
Phone: (800) 879-1887  
Phone: (513) 891-4000  
Fax: (513) 794-2911

### **Huntsville Branch**

5650 Sanderson Street NW  
Suite J  
Huntsville, AL 35805  
Phone: (256) 895-2845  
Fax: (256) 895-3150

### **Torrance Branch**

21241 South Western Avenue  
Suite 212  
Torrance, CA 90501  
Phone: (800) 950-5202  
Fax: (310) 782-0211

### **Sumitomo Hardmetal Mexico (SHMM)**

Ave. Aguascalientes Sur 2625  
Fracc. Jardines de las Fuentes  
Aguascalientes, AGS Mexico  
C.P. 20290  
Phone: 011-52-449-993-2740  
Fax: 011-52-449-993-2753

