



**CARBIDE INSERTS**

SERIES 978:

Please order in package quantity, 10 inserts in a package.  
TiN Coated is C5/C6 grade unless otherwise specified.



CUTTING TOOLS - CARBIDE INSERTS

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TPG-220	1/4	1/8	0	9785585		9785586		9785884	
TPG-221	1/4	1/8	1/64	9784820		9784821		9784822	
TPG-222	1/4	1/8	1/32	9785589		9785590		9785838	
TPG-223	1/4	1/8	3/64	9785591		9785592		9785839	
TPG-320	3/8	1/8	0	9785887		9785888		9785046	
TPG-321	3/8	1/8	1/64	9784823		9784824		9784826	
TPG-322	3/8	1/8	1/32	9784925		9784926		9784927	
TPG-323	3/8	1/8	3/64	9784929		9784930		9784931	
TPG-324	3/8	1/8	1/16	9784933		9784934		9784935	
TPG-430	1/2	3/16	0	9785608		9785609		9785845	
TPG-431	1/2	3/16	1/64	9785610		9785611		9785846	
TPG-432	1/2	3/16	1/32	9785612		9785613		9785847	
TPG-433	1/2	3/16	3/64	9785614		9785615		9785848	
TPG-434	1/2	3/16	1/16	9785616		9785617		9785849	
TPG-542	5/8	1/4	1/32	9785618		9785619		9785885	
TPG-543	5/8	1/4	3/64	9785620		9785621		9785850	
TPG-544	5/8	1/4	1/16	9785622		9785623		9785851	



TRIANGLE — POSITIVE RAKE  
GROUND ALL OVER

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TNG-221	1/4	1/8	1/64	9785467		9785468		9785777	
TNG-222	1/4	1/8	1/32	9785469		9785470		9785778	
TNG-321	3/8	1/8	1/64	9785471		9785472		9785779	
TNG-322	3/8	1/8	1/32	9785473		9785474		9785780	
TNG-323	3/8	1/8	3/64	9785475		9785476		9785781	
TNG-324	3/8	1/8	1/16	9785477		9785478		9785782	
TNG-332	3/8	3/16	1/32	9785479		9785480		9785783	
TNG-333	3/8	3/16	3/64	9785481		9785482		9785784	
TNG-432	1/2	3/16	1/32	9785483		9785484		9785785	
TNG-433	1/2	3/16	3/64	9785485		9785486		9785786	
TNG-434	1/2	3/16	1/16	9785487		9785488		9785787	
TNG-544	5/8	1/4	1/16	9785489		9785490		9785788	



TRIANGLE — NEGATIVE RAKE  
GROUND ALL OVER

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TPU-222	1/4	1/8	1/32	9785642		9785643		9785861	
TPU-321	3/8	1/8	1/64	9785644		9785645		9785862	
TPU-322	3/8	1/8	1/32	9785646		9785647		9785863	
TPU-323	3/8	1/8	3/64	9785648		9785649		9785864	
TPU-431	1/2	3/16	1/64	9785650		9785651		9785865	
TPU-432	1/2	3/16	1/32	9785652		9785653		9785866	
TPU-433	1/2	3/16	3/64	9785654		9785655		9785867	
TPU-434	1/2	3/16	1/16	9785656		9785657		9785868	
TPU-543	5/8	1/4	3/64	9785658		9785659		-	
TPU-544	5/8	1/4	1/16	9785660		9785661		9785869	



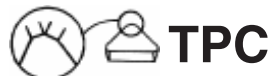
TRIANGLE — POSITIVE RAKE  
GROUND TOP AND BOTTOM

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TNU-222	1/4	1/8	1/32	9785563		9785564		9785828	
TNU-322	3/8	1/8	1/32	9785565		9785566		9785829	
TNU-323	3/8	1/8	3/64	9785567		9785568		9785830	
TNU-332	3/8	3/16	1/32	9785569		9785570		-	
TNU-333	3/8	3/16	3/64	9785571		9785572		9785831	
TNU-432	1/2	3/16	1/32	9785573		9785574		9785832	
TNU-433	1/2	3/16	3/64	9785575		9785576		9785833	
TNU-434	1/2	3/16	1/16	9785577		9785578		9785834	
TNU-544	5/8	1/4	1/16	9785579		9785580		9785835	



TRIANGLE — NEGATIVE RAKE  
GROUND TOP AND BOTTOM

Insert Number	I.C.	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated	
			Order No.	Price	Order No.	Price	Order No.	Price
TPC-32ZR	3/8	1/8	9784937		9784938		9784939	



TRIANGLE — POSITIVE RAKE  
GROUND ALL OVER WITH  
WIPING FLATS ON THREE  
CORNERS



**CARBIDE INSERTS**

SERIES 978:

Please order in package quantity, 10 inserts in a package.  
TiN Coated is C5/C6 grade unless otherwise specified.



CUTTING TOOLS - CARBIDE INSERTS

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TNMG-221	1/4	1/8	1/64	9785519		9785520		9785803	
TNMG-222	1/4	1/8	1/32	9785521		9785522		9785804	
TNMG-321	3/8	1/8	1/64	9785523		9785524		9785805	
TNMG-322	3/8	1/8	1/32	9785525		9785526		9785806	
TNMG-323	3/8	1/8	3/64	9785527		9785528		9785807	
TNMG-324	3/8	1/8	1/16	9785529		9785530		9785808	
TNMG-331	3/8	3/16	1/64	9785531		9785532		9785809	
TNMG-332	3/8	3/16	1/32	9785533		9785534		9785810	
TNMG-333	3/8	3/16	3/64	9785535		9785536		9785811	
TNMG-431	1/2	3/16	1/64	9785021		9785022		9785023	
TNMG-432	1/2	3/16	1/32	9785024		9785025		9785026	
TNMG-433	1/2	3/16	3/64	9785027		9785028		9785029	
TNMG-434	1/2	3/16	1/16	9785030		9785031		9785032	
TNMG-438	1/2	3/16	1/8	9785033		9785034		9785035	
TNMG-542	5/8	1/4	1/32	9785547		9785548		9785816	
TNMG-543	5/8	1/4	3/64	9785549		9785550		9785817	
TNMG-544	5/8	1/4	1/16	9785551		9785552		9785818	
TNMG-666*	3/4	3/8	3/32	9785553		9785554		9785819	



**TNMG**  
TRIANGLE — NEGATIVE RAKE  
WITH CHIP CONTROL

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TNMA-222	1/4	1/8	1/32	9785491		9785492		9785789	
TNMA-322	3/8	1/8	1/32	9785493		9785494		9785790	
TNMA-323	3/8	1/8	3/64	9785495		9785496		9785791	
TNMA-432	1/2	3/16	1/32	9785499		9785500		9785793	
TNMA-433	1/2	3/16	3/64	9785501		9785502		9785794	
TNMA-434	1/2	3/16	1/16	9785503		9785504		9785795	
TNMA-438	1/2	3/16	1/8	9785505		9785506		9785796	
TNMA-542	5/8	1/4	1/32	9785509		9785510		9785798	
TNMA-544	5/8	1/4	1/16	9785511		9785512		9785799	
TNMA-666*	3/4	3/8	3/32	9785513		9785514		9785800	



**TNMA**  
\*5pcs per pkg  
TRIANGLE — NEGATIVE RAKE  
LAPPED TOP AND BOTTOM  
WITH HOLE

Insert Number	I.C.	Thickness	Radius	Grade			
				C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price
TNMP-321	3/8	1/8	1/64	9785555		9785820	
TNMP-322	3/8	1/8	1/32	9785556		9785821	
TNMP-323	3/8	1/8	3/64	9785557		9785822	
TNMP-331	3/8	3/16	1/64	9785558		9785823	
TNMP-332	3/8	3/16	1/32	9785559		9785824	
TNMP-333	3/8	3/16	3/64	9785560		9785825	
TNMP-431	1/2	3/16	1/64	9785561		9785826	
TNMP-432	1/2	3/16	1/32	9785562		9785827	



**TNMP**  
\*5pc per pkg  
TRIANGLE — NEGATIVE RAKE  
5° POSITIVE

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TPGH-21.50	1/4	3/32	0	9785624		9785625		9785852	
TPGH-21.51	1/4	3/32	1/64	9785626		9785627		9785853	
TPGH-21.52	1/4	3/32	1/32	9785628		9785629		9785854	
TPGH-321	3/8	1/8	1/64	9785630		9785631		9785855	
TPGH-322	3/8	1/8	1/32	9785632		9785633		9785856	



**TPGH**  
TRIANGLE — POSITIVE RAKE  
GROUND ALL OVER WITH  
CHIP GROOVE ON ONE SIDE

Insert Number	I.C.	Thickness	Radius	Hole	Grade	
					C-2	
					Order No.	Price
TNUC-21.52	1/4	3/32	1/32	.136	9785581	
TNUC-222	1/4	1/8	1/32	.136	9785582	



**TNUC**  
TRIANGLE — NEGATIVE RAKE  
BRAKE TURNING INSERT



**CARBIDE INSERTS**

**SERIES 978:**

Please order in package quantity. 10 inserts in a package.  
TiN Coated is C5/C6 grade unless otherwise specified.



CUTTING TOOLS - CARBIDE INSERTS

Insert Number	I.C.	Thickness	Hole Size	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TPMA-32NV	3/8	.125	.150	9785634		9785635		9785857	
TPMA-43NV	1/2	.188	.203	9785636		9785637		9785858	



**TPMA-NV**

TRIANGLE— POSITIVE RAKE  
60° V-THREAD

Insert Number	I.C.	Thickness	Hole Size	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TPMC-32NV	3/8	.125	.150	9785638		9785639		9785859	
TPMC-43NV	1/2	.188	.203	9785640		9785641		9785860	



**TPMC-NV**

TRIANGLE— POSITIVE RAKE  
60° V-THREAD

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SPG-321	3/8	1/8	1/64	9785423		9785424		9785754	
SPG-322	3/8	1/8	1/32	9785425		9785426		9785755	
SPG-323	3/8	1/8	3/64	9785427		9785428		9785756	
SPG-420	1/2	1/8	0	9785429		9785430		9785889	
SPG-421	1/2	1/8	1/64	9785431		9785432		9785881	
SPG-422	1/2	1/8	1/32	9785433		9785434		9785757	
SPG-423	1/2	1/8	3/64	9785435		9785436		9785758	
SPG-424	1/2	1/8	1/16	9785437		9785438		9785759	
SPG-432	1/2	3/16	1/32	9785439		9785440		9785760	
SPG-433	1/2	3/16	3/64	9785441		9785442		9785761	
SPG-632	3/4	3/16	1/32	9785443		9785444		9785762	
SPG-633	3/4	3/16	3/64	9785445		9785446		9785763	
SPG-634	3/4	3/16	1/16	9785447		9785448		9785764	



**SPG**

SQUARE — POSITIVE RAKE  
GROUND ALL OVER

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SPU-322	3/8	1/8	1/32	9785453		9785454		9785767	
SPU-421	1/2	1/8	1/64	9785455		9785456		9785768	
SPU-422	1/2	1/8	1/32	9785457		9785458		9785769	
SPU-423	1/2	1/8	3/64	9785459		9785460		9785770	
SPU-632	3/4	3/16	1/32	9785461		9785462		9785771	
SPU-633	3/4	3/16	3/64	9785463		9785464		9785772	
SPU-634	3/4	3/16	1/16	9785465		9785466		9785773	



**SPU**

SQUARE — POSITIVE RAKE  
GROUND TOP AND BOTTOM

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SNMA-322	3/8	1/8	1/32	9785367		9785368		9785726	
SNMA-432	1/2	3/16	1/32	9785369		9785370		9785727	
SNMA-433	1/2	3/16	3/64	9785371		9785372		9785728	
SNMA-543	5/8	1/4	3/64	9785373		9785374		9785729	
SNMA-633	3/4	1/4	3/64	9785375		9785376		9785730	
SNMA-643	3/4	1/4	3/64	9785377		9785378		9785731	
SNMA-644	3/4	1/4	1/16	9785379		9785380		9785732	
SNMA-866	1	3/8	3/32	9785381		9785382		9785733	



**SNMA**

SQUARE — NEGATIVE RAKE  
LAPPED TOP AND BOTTOM  
WITH HOLE

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SNMG-322	3/8	1/8	1/32	9785383		9785384		9785734	
SNMG-323	3/8	1/8	3/64	9785385		9785386		9785735	
SNMG-432	1/2	3/16	1/32	9785387		9785388		9785736	
SNMG-433	1/2	3/16	3/64	9785389		9785390		9785737	
SNMG-434	1/2	3/16	1/16	9785391		9785392		9785738	
SNMG-543	5/8	1/4	3/64	9785393		9785394		9785739	
SNMG-642	3/4	1/4	1/32	9785395		9785396		9785740	
SNMG-643	3/4	1/4	3/64	9785397		9785398		9785741	
SNMG-644	3/4	1/4	1/16	9785399		9785400		9785742	
SNMG-866	1	3/8	3/32	9785401		9785402		9785743	



**SNMG**

SQUARE — NEGATIVE RAKE  
WITH CHIP CONTROL

\*C-5 & C-6 Grade TiN Coated



**CARBIDE INSERTS**

SERIES 978:

Please order in package quantity. 10 inserts in a package.  
TiN Coated is C5/C6 grade unless otherwise specified.



Insert Number	I.C.	Thickness	Hole Size	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TNMA-32NV	3/8	.125	.150	9785497		9785498		9785792	
TNMA-43NV	1/2	.188	.203	9785507		9785508		9785797	

**TNMA-NV**  
TRIANGLE— NEUTRAL RAKE  
60° V-THREAD

Insert Number	I.C.	Thickness	Hole Size	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
TNMC-32NV	3/8	.125	.150	9785515		9785516		9785801	
TNMC-43NV	1/2	.188	.203	9785517		9785518		9785802	

**TNMC-NV**  
TRIANGLE— NEUTRAL RAKE  
60° V-THREAD

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SNG-321	3/8	1/8	1/64	9785342		9785343		9785713	
SNG-322	3/8	1/8	1/32	9785344		9785345		9785714	
SNG-323	3/8	1/8	3/64	9785346		9785347		9785715	
SNG-332	1/8	3/16	1/32	-		9785348		9785716	
SNG-422	1/2	1/8	1/32	9785349		9785350		9785717	
SNG-423	1/2	1/8	3/64	9785351		9785352		9785718	
SNG-424	1/2	1/8	1/16	9785353		9785354		9785719	
SNG-432	1/2	3/16	1/32	9785355		9785356		9785720	
SNG-433	1/2	3/16	3/64	9785357		9785358		9785721	
SNG-434	1/2	3/16	1/16	9785359		9785360		9785722	
SNG-632	3/4	3/16	1/32	9785361		9785362		9785723	
SNG-633	3/4	3/16	3/64	9785363		9785364		9785724	
SNG-634	3/4	3/16	1/16	9785365		9785366		9785725	

**SNG**  
SQUARE — NEGATIVE RAKE  
GROUND ALL OVER

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SNU-322	3/8	1/8	1/32	9785403		9785404		9785744	
SNU-422	1/2	1/8	1/32	9785405		9785406		9785745	
SNU-423	1/2	1/8	3/64	9785407		9785408		9785746	
SNU-424	1/2	1/8	1/16	9785409		9785410		9785747	
SNU-432	1/2	3/16	1/32	9785411		9785412		9785748	
SNU-433	1/2	3/16	3/64	9785413		9785414		9785749	
SNU-434	1/2	3/16	1/16	9785415		9785416		9785750	
SNU-633	3/4	3/16	3/64	9785417		9785418		9785751	
SNU-634	3/4	3/16	1/16	9785419		9785420		9785752	

**SNU**  
SQUARE — NEGATIVE RAKE  
GROUND TOP AND BOTTOM

Insert Number	I.C.	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated	
			Order No.	Price	Order No.	Price	Order No.	Price
SPC-42ZR	1/2	1/8	9785008		9785009		9785010	

**SPC**  
SQUARE — POSITIVE RAKE  
GROUND ALL OVER W/ WIPING  
FLATS ON FOUR CORNERS

Insert Number	I.C.	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated	
			Order No.	Price	Order No.	Price	Order No.	Price
SEC-422	1/2	1/8	9785338		9785339		9785711	
SEC-422J	1/2	1/8	9785340		9785341		9785712	

**SEC**  
SQUARE — 20° POSITIVE RAKE  
GROUND ALL OVER

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
SPGH-432	1/2	1/32	3/64	9785449		9785450		9785765	
SPGH-433	1/2	3/16	3/64	9785451		9785452		9785766	

**SPGH**  
SQUARE — POSITIVE RAKE  
GROUND ALL OVER  
CHIP GROOVE ONE SIDE



**CARBIDE INSERTS**

**SERIES 978:**

Please order in package quantity. 10 inserts in a package.  
TiN Coated is C5/C6 grade unless otherwise specified.



CUTTING TOOLS - CARBIDE INSERTS

Insert Number	Dia. ± .001	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated	
			Order No.	Price	Order No.	Price	Order No.	Price
RNG-32	3/8	1/8	9785310		9785311		9785694	
RNG-42	1/2	1/8	9785312		9785313		9785695	
RNG-43	1/2	3/16	9785314		9785315		9785696	



**RNG**  
ROUND — NEGATIVE RAKE  
GROUND ALL OVER

Insert Number	Dia. ± .001	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated	
			Order No.	Price	Order No.	Price	Order No.	Price
RNMA-32	3/8	1/8	9785318		9785319		9785698	
RNMA-43	1/2	3/16	9785320		9785321		9785699	
RNMA-64	3/4	1/4	9785322		9785323		9785700	
RNMA-86*	1	3/8	9785324		9785325		9785701	
RNMA-106*	1-1/4	3/8	9785316		9785317		9785702	



**RNMA**  
ROUND — NEGATIVE RAKE  
LAPPED TOP AND BOTTOM  
WITH HOLE

\*5pcsper pkg

Insert Number	I.C.	Thickness	Radius	Grade			
				C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price
DNMG-431	1/2	3/16	1/64	9785953		9785686	
DNMG-432	1/2	3/16	1/32	9785954		9785687	
DNMG-532	5/8	3/16	1/32	9785305		9785688	
DNMG-533	5/8	3/16	3/64	9785307		9785689	
DNMG-542	5/8	1/4	1/32	9785308		9785690	
DNMG-543	5/8	1/4	3/64	9785309		9785691	



**DNMG**  
55° DIAMOND — NEGATIVE RAKE  
WITH CHIP CONTROL

Insert Number	I.C.	Thickness	Radius	Grade					
				C-2		C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price	Order No.	Price
CNMG-431	1/2	3/16	1/64	9785955		9785959		9785672	
CNMG-432	1/2	3/16	1/32	9785956		9785960		9785673	
CNMG-433	1/2	3/16	3/64	9785957		9785961		9785674	
CNMG-542	5/8	1/4	1/32	-		9785962		9785675	
CNMG-543	5/8	1/4	3/64	-		9785963		9785676	
CNMG-643	3/4	1/4	3/64	9785958		9785964		9785677	
CNMG-644	3/4	1/4	1/16	-		9785965		9785678	



**CNMG**  
80° DIAMOND — NEGATIVE  
LAPPED WITH HOLE AND  
CAST CHIPBREAKER

Insert Number	Dia. ± .001	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated*	
			Order No.	Price	Order No.	Price	Order No.	Price
RPG-42	1/2	1/8	9785336		9785337		9785708	



**RPG**  
ROUND — POSITIVE RAKE  
GROUND ALL OVER

Insert Number	Dia. ± .001	Thickness	Grade					
			C-2		C-5 & C-6		TiN Coated*	
			Order No.	Price	Order No.	Price	Order No.	Price
RNMG-32	3/8	1/8	9785328		9785329		9785703	
RNMG-43	1/2	3/16	9785330		9785331		9785704	
RNMG-64	3/4	1/4	9785332		9785333		9785705	
RNMG-86*	1	3/8	9785334		9785335		9785706	



**RNMG**  
ROUND — NEGATIVE RAKE  
WITH CHIP CONTROL

\*5pcsper pkg

Insert Number	I.C.	Thickness	Radius	Grade			
				C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price
VNMG-331	3/8	3/16	1/64	9785663		9785872	
VNMG-332	3/8	3/16	1/32	9785665		9785966	
VNMG-333	3/8	3/16	3/64	9785666		9785774	
VNMG-431	1/2	3/16	1/64	9785667		9785775	
VNMG-432	1/2	3/16	1/32	9785668		9785776	



**VNMG**  
35° DIAMOND — NEGATIVE RAKE  
WITH CHIP CONTROL

Insert Number	I.C.	Thickness	Radius	Grade			
				C-5 & C-6		TiN Coated	
				Order No.	Price	Order No.	Price
CNMP-431	1/2	3/16	1/64	9785967		9785679	
CNMP-432	1/2	3/16	1/32	9785968		9785680	
CNMP-642	3/4	1/4	1/32	9785969		9785681	
CNMP-643	3/4	1/4	3/64	9785970		9785682	



**CNMP**  
80° DIAMOND — 5° POSITIVE  
LAPPED WITH HOLE  
AND CAST CHIPBREAKER