

AC5015S/AC5025S

2nd



New coated grades for exotic alloy turning, creating absolutely stable cutting in various work materials

New

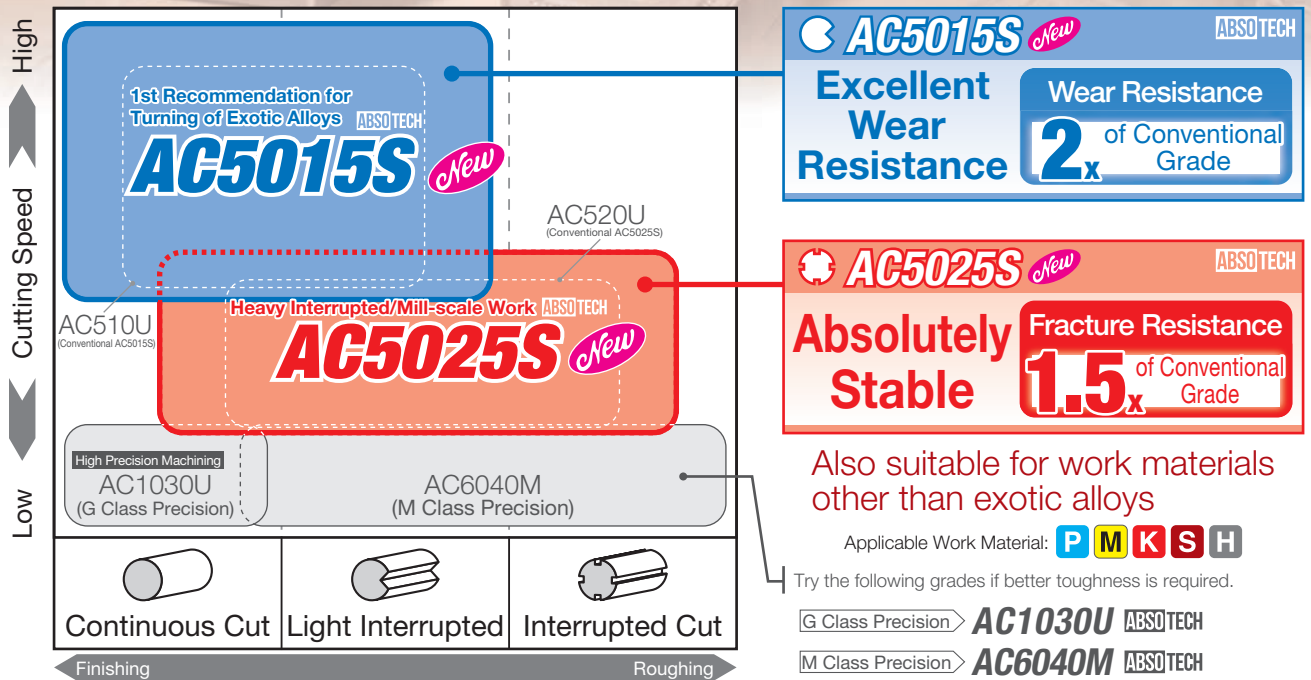
GU Series
General-purpose positive
M-class chipbreaker

New coated grades for Exotic alloy turning



AC5015S/AC5025S

Application Range



AC5015S/AC5025S Features



New PVD-Coating Technology **ABSOTECH**

Absotech™

Highly heat-resistant ultra multi-layered thin-film AlTiSiN structure realizes excellent crater wear resistance and flank wear resistance.

Newly Developed Highly Adhesive Technology

Greatly improved coating adhesion realizes excellent notch wear resistance.

Newly Developed Tough Carbide Substrate

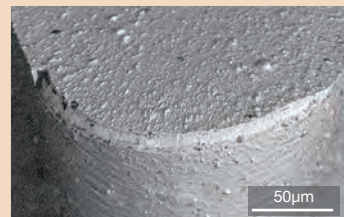
Introduction of a revolutionary new sintering process enables hardness to be maintained while greatly improving toughness, achieving excellent notch wear and chipping resistance.

AC5015S / AC5025S

Conv.

Excellent Cutting Edge Quality

50µm



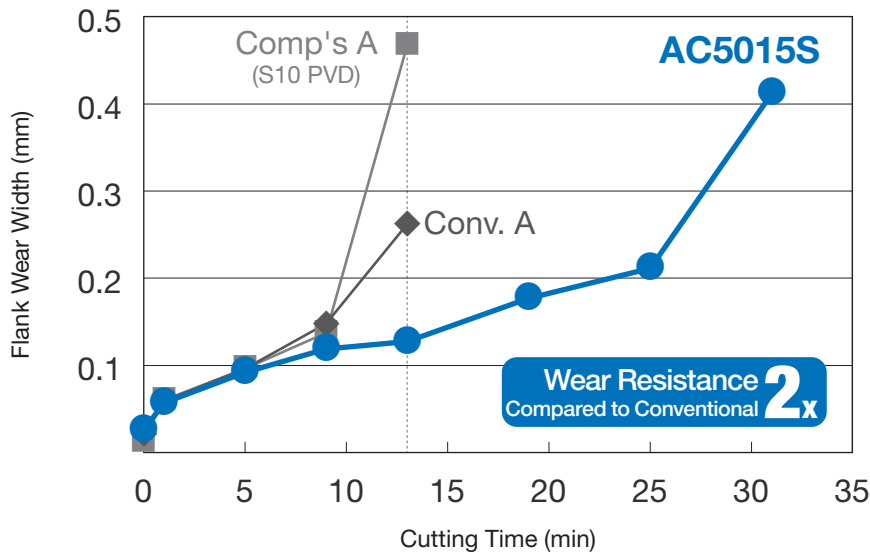
50µm

● Chipbreaker Selection

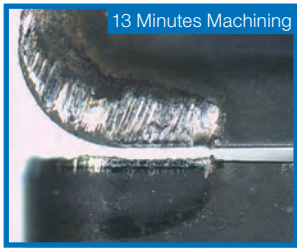
Negative Type Inserts	<p>For Finishing</p> <p>EF Type</p> <p>Main chipbreaker exhibits excellent chip evacuation performance even with shallow cuts</p> <p>Cutting edge designed with an emphasis on sharpness (20° rake) to suppress wear</p> <p>Grooved rake surface suppresses heat generation and uneven contact stress</p>	<p>Chipbreaker Cross-Section</p> <p>At The Nose Radius</p> <p>Along The Cutting Edge</p> <p>CNMG120400 Type</p>	
	<p>For Medium to Rough Cut</p> <p>EG Type</p> <p>Spherical protrusions exhibit excellent chip evacuation performance over a wide range of conditions</p> <p>Cutting edge shape keeps its strength even as wear progresses</p>	<p>Chipbreaker Cross-Section</p> <p>At The Nose Radius</p> <p>Along The Cutting Edge</p> <p>CNMG120400 Type</p>	
	<p>For Rough Cut</p> <p>EM Type</p> <p>Large convex rake face design keeps its cutting edge strength while suppressing crater wear</p> <p>Reducing notch wear by eliminating the change of cutting points on the cutting edge</p>	<p>Chipbreaker Cross-Section</p> <p>At The Nose Radius</p> <p>Along The Cutting Edge</p> <p>CNMG120400 Type</p>	
Positive Type Inserts	<p>For Finishing to Light Cut</p> <p>SI Type</p> <p>Dimpled shape suppresses heat generation due to large cuts</p> <p>Cutting edge designed with an emphasis on sharpness (15° rake)</p> <p>Cutting edge shape intended to improve copy machining and reduce cutting resistance</p>	<p>Chipbreaker Cross-Section</p> <p>At The Nose Radius</p> <p>Along The Cutting Edge</p> <p>CCGT09T300 Type</p>	
	<p>For Light to Medium Cut</p> <p>GU Type <i>New</i></p> <p>Suppresses chip build-up at high feed rates for ideal chip control</p> <p>Protrusion design controls chip flow</p> <p>Rake shape with excellent balance of sharpness and strength</p>	<p>Chipbreaker Cross-Section</p> <p>At The Nose Radius</p> <p>Along The Cutting Edge</p> <p>CCGT09T300 Type</p>	

AC5015S/AC5025S

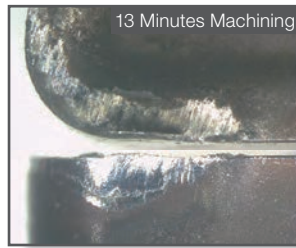
● Comparison of Wear Resistance for AC5015S New PVD Coating Technology Absotech™ Reduces Wear



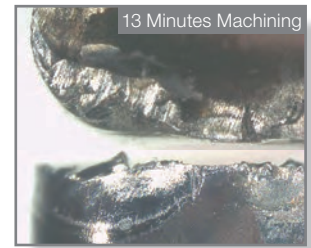
Work Material: Inconel 718 (44HRC)
 Inserts: CNMG120408
 Cutting Conditions: $v_c=40\text{m/min}$
 $f=0.1\text{mm/rev}$
 $a_p=1.5\text{mm}$
 Wet



AC5015S

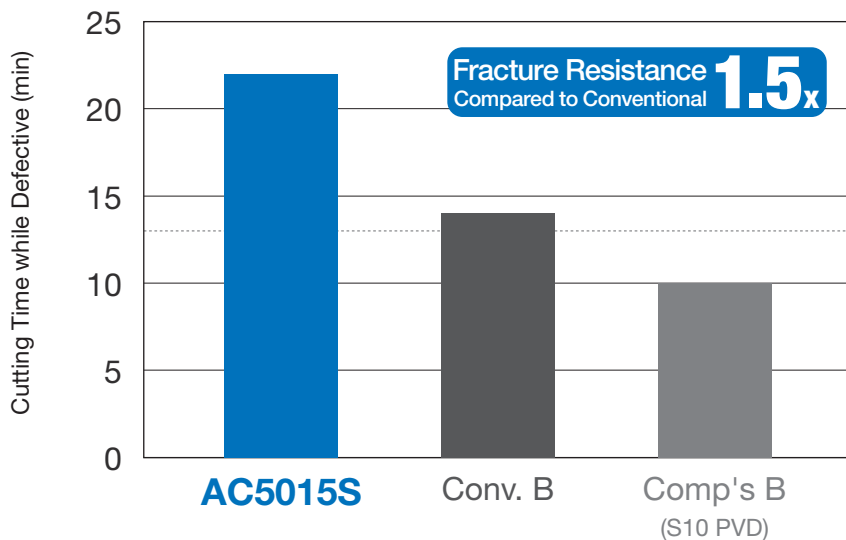


Conv. A

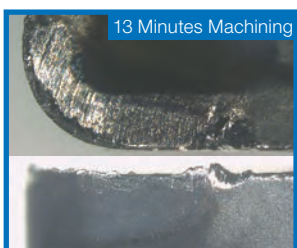


Comp's A (S10 PVD)

● Comparison of Fracture Resistance for AC5015S Newly Developed Tough Substrate Suppresses Notch Wear



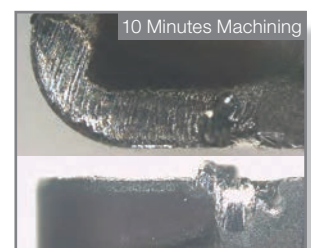
Work Material: Hastelloy (22HRC)
 Inserts: CNMG120408
 Cutting Conditions: $v_c=50\text{m/min}$
 $f=0.1\text{mm/rev}$
 $a_p=1.5\text{mm}$
 Wet



AC5015S

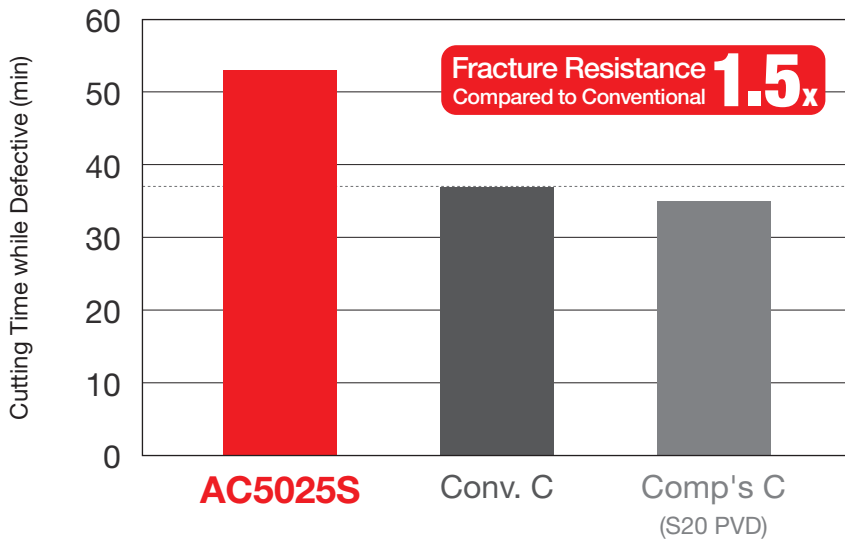


Conv. B

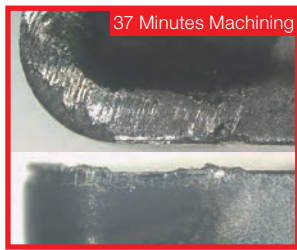


Comp's B (S10 PVD)

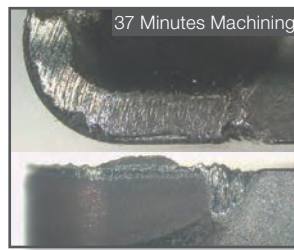
● **Comparison of Fracture Resistance for AC5025S** Newly Developed Tough Substrate Suppresses Notch Wear



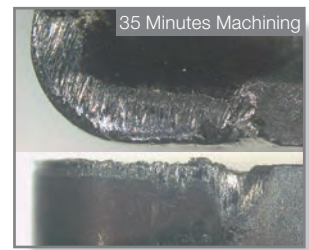
Work Material: Hastelloy (22HRC)
 Inserts: CNMG120408
 Cutting Conditions: $v_c=50\text{m/min}$
 $f=0.1\text{mm/rev}$
 $a_p=1.5\text{mm}$
 Wet



AC5025S

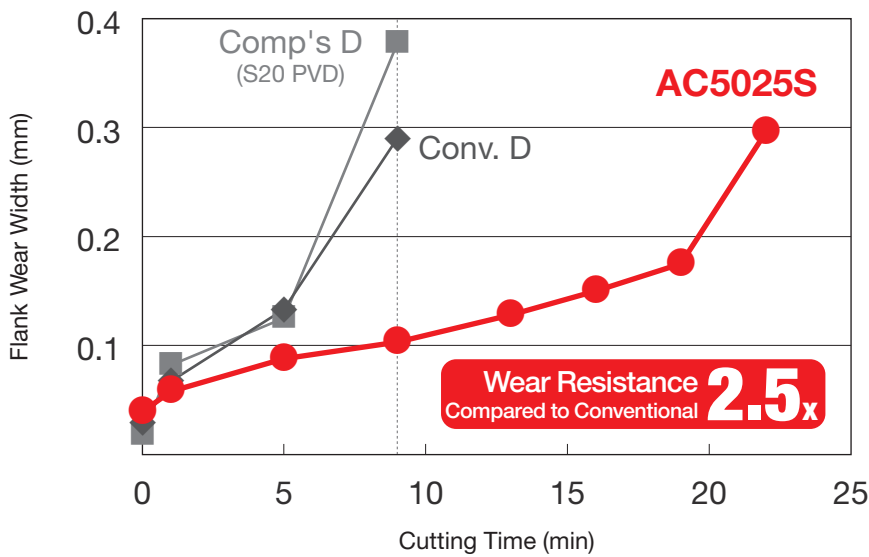


Conv. C

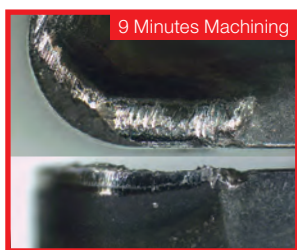


Comp's C (S20 PVD)

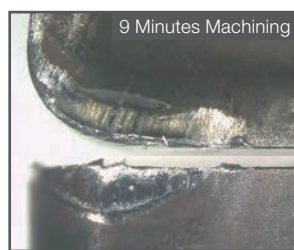
● **Comparison of Wear Resistance for AC5025S** New PVD Coating Technology Absotech™ Reduces Wear



Work Material: Inconel 718 (44HRC)
 Inserts: CNMG120408
 Cutting Conditions: $v_c=40\text{m/min}$
 $f=0.1\text{mm/rev}$
 $a_p=1.5\text{mm}$
 Wet



AC5025S

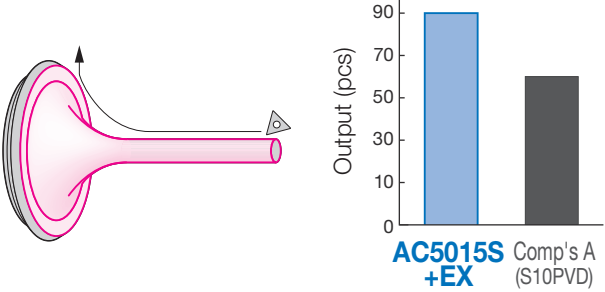
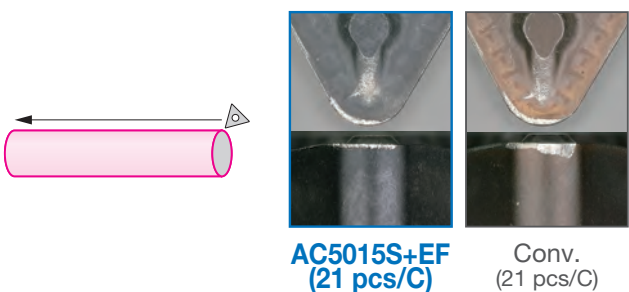
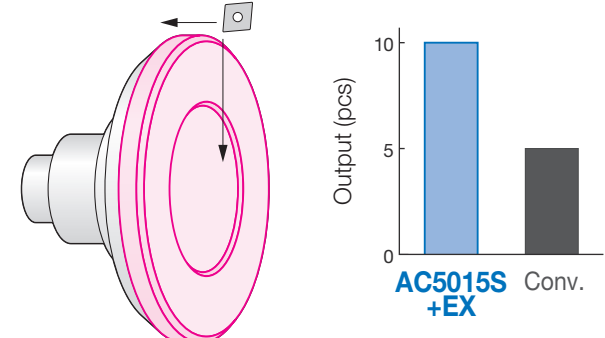
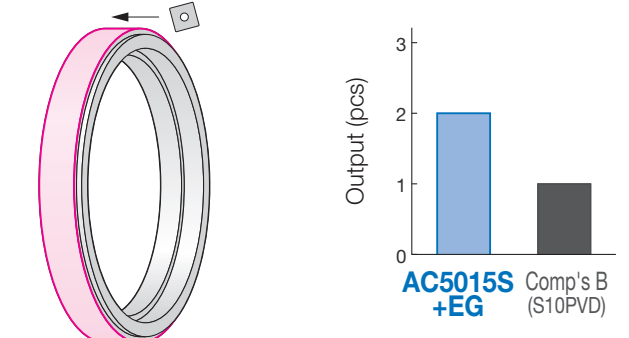
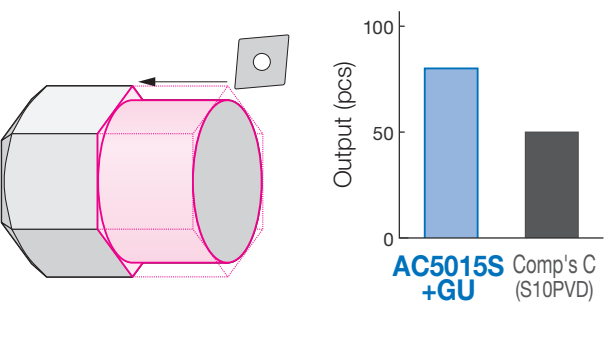
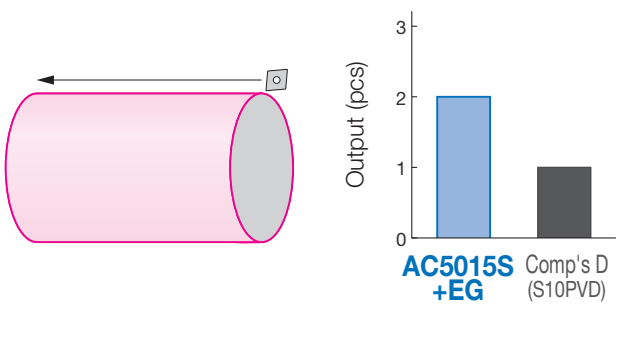


Conv. D

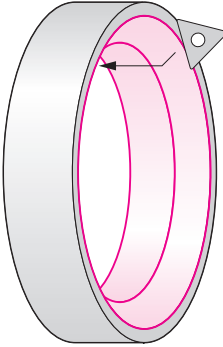
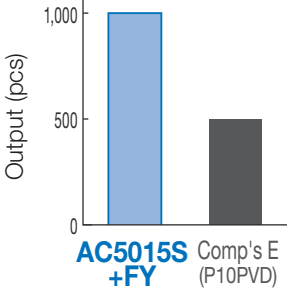
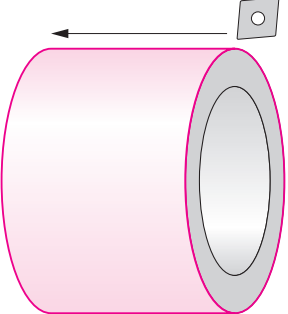
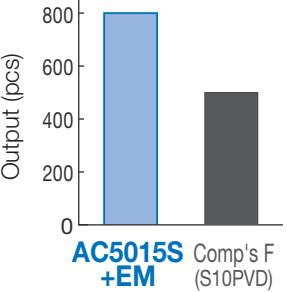
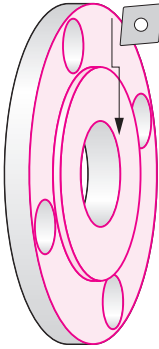
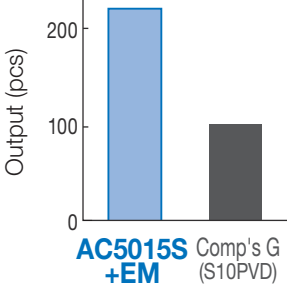
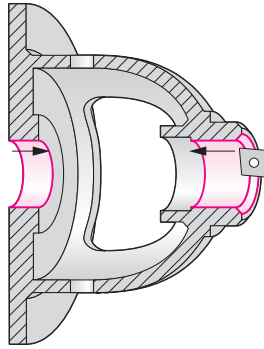
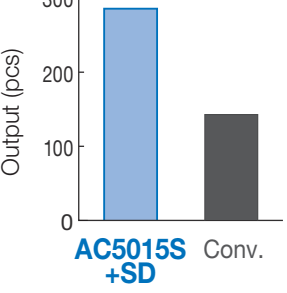
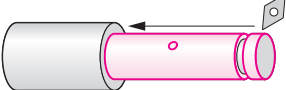
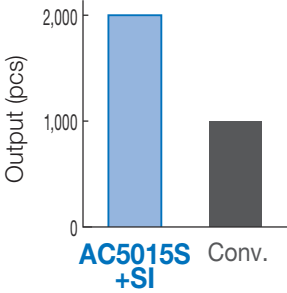
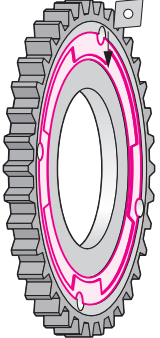
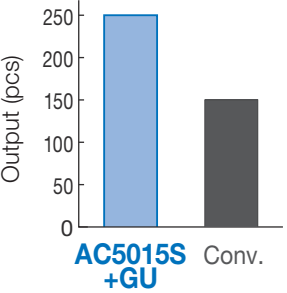


Comp's D (S20 PVD)

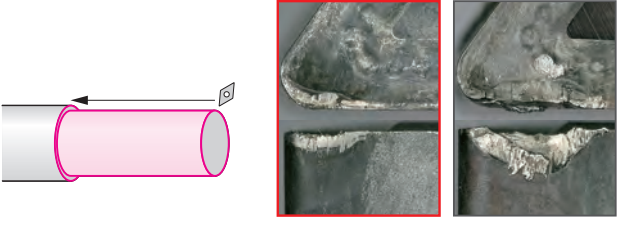
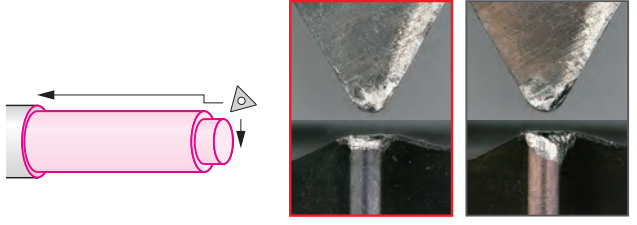
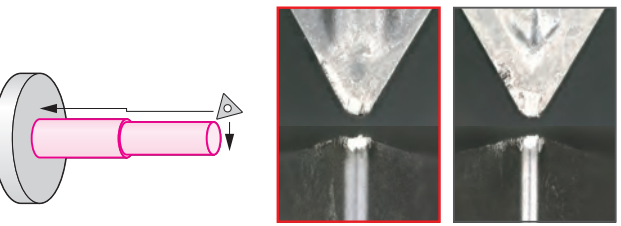
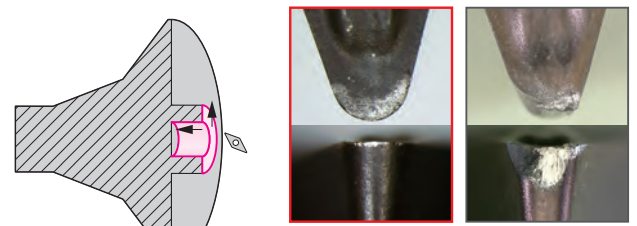
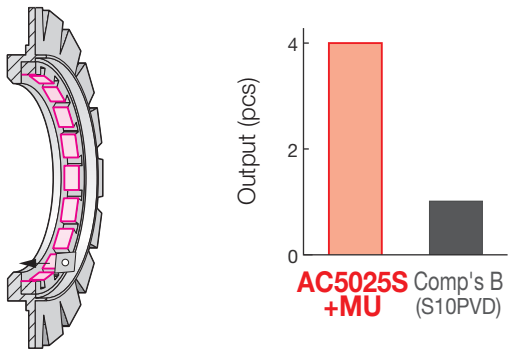
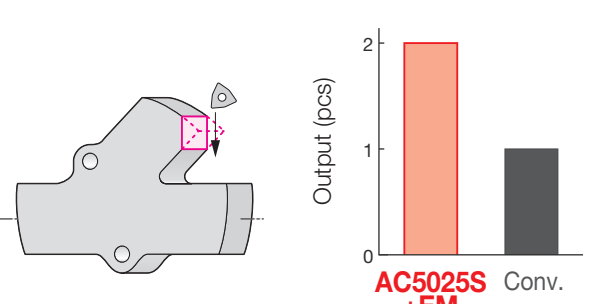
●Application Examples of AC5015S

<p>Ni-Based Heat-Resistant Alloy Automotive Components S</p> <p>Good wear resistance for 1.5x longer tool life</p>  <p>Output (pcs)</p> <p>AC5015S +EX 90 Comp's A (S10PVD) 60</p> <p>Insert: TNMG160408N-EX (AC5015S) Cutting Conditions: $v_c=82\text{m/min}$ $f=0.12\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet</p>	<p>Inconel Automotive Components S</p> <p>Reduces wear and extends tool life</p>  <p>Output (pcs)</p> <p>AC5015S+EF (21 pcs/C) Conv. (21 pcs/C)</p> <p>Insert: TNMG160408N-EF (AC5015S) Cutting Conditions: $v_c=30\text{m/min}$ $f=0.04\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet</p>
<p>Inconel 713C Automotive Components S</p> <p>Reduces wear for 2x longer tool life</p>  <p>Output (pcs)</p> <p>AC5015S +EX 10 Conv. 5</p> <p>Insert: CNMG120408N-EX (AC5015S) Cutting Conditions: $v_c=100\text{m/min}$ $f=0.12\text{mm/rev}$ $a_p=0.3\text{mm}$ Wet</p>	<p>Inconel 718 Aerospace Components S</p> <p>Good wear resistance for 2x longer tool life</p>  <p>Output (pcs)</p> <p>AC5015S +EG 2 Comp's B (S10PVD) 1</p> <p>Insert: SNMG120408N-EG (AC5015S) Cutting Conditions: $v_c=50\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=2.0\text{mm}$ Wet</p>
<p>Inconel 625 Aerospace Components S</p> <p>Good wear resistance for 1.6x longer tool life</p>  <p>Output (pcs)</p> <p>AC5015S +GU 80 Comp's C (S10PVD) 50</p> <p>Insert: CNMG120408N-GU (AC5015S) Cutting Conditions: $v_c=50\text{m/min}$ $f=0.3\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet</p>	<p>Inconel 718 Aerospace Components S</p> <p>Good wear resistance for 2x longer tool life</p>  <p>Output (pcs)</p> <p>AC5015S +EG 2 Comp's D (S10PVD) 1</p> <p>Insert: CNMG120408N-EG (AC5015S) Cutting Conditions: $v_c=37\text{m/min}$ $f=0.2\text{mm/rev}$ $a_p=1.4\text{mm}$ Wet</p>

● Application Examples of AC5015S

<p>SUJ2 Automotive Components P</p> <p>Reduces wear for 2x longer tool life</p>   <p>Output (pcs)</p> <p>AC5015S +FY 1000 Comp's E (P10PVD) 500</p> <p>Insert: TNGG160402R-FY (AC5015S) Cutting Conditions: $v_c=120\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=0.3\text{mm}$ Wet</p>	<p>Alloy Steel Industrial Machine Components P</p> <p>Stable machining for 1.6x longer tool life</p>   <p>Output (pcs)</p> <p>AC5015S +EM 800 Comp's F (S10PVD) 500</p> <p>Insert: CNMG120408N-EM (AC5015S) Cutting Conditions: $v_c=120\text{m/min}$ $f=0.25\text{mm/rev}$ $a_p=0.30\text{mm}$ Wet</p>
<p>SCS13A Stainless Cast Steel Valve Parts M</p> <p>Reduces wear for 2.2x longer tool life</p>   <p>Output (pcs)</p> <p>AC5015S +EM 220 Comp's G (S10PVD) 100</p> <p>Insert: CNMG120408N-EM (AC5015S) Cutting Conditions: $v_c=90\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=2.00\text{mm}$ Wet</p>	<p>FCD450 Automotive Components K</p> <p>Reduces wear for 2x longer tool life</p>   <p>Output (pcs)</p> <p>AC5015S +SD 280 Conv. 140</p> <p>Insert: CPGT090308N-SD (AC5015S) Cutting Conditions: $v_c=210\text{m/min}$ $f=0.19\text{mm/rev}$ $a_p=0.25\text{mm}$ Wet</p>
<p>Hardened Steel Automotive Components (47HRC) H</p> <p>Reduces wear for 2x longer tool life</p>   <p>Output (pcs)</p> <p>AC5015S +SI 2000 Conv. 1000</p> <p>Insert: DCGT070202MN-SI (AC5015S) Cutting Conditions: $v_c=70\text{m/min}$ $f=0.03\text{mm/rev}$ $a_p=0.80\text{mm}$ Wet</p>	<p>Sintered Ferrous Alloy Automotive Components Sintered Alloy</p> <p>Suppresses notch wear for 1.7x longer tool life</p>   <p>Output (pcs)</p> <p>AC5015S +GU 250 Conv. 150</p> <p>Insert: CNMG120408N-GU (AC5015S) Cutting Conditions: $v_c=170\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=0.30\text{mm}$ Wet</p>

●Application Examples of AC5025S

<p>Inconel 718 Aerospace Components S</p> <p>Reduces wear for 1.7x longer tool life</p>  <p>AC5025S+EG (2.5 pcs/C)</p> <p>Conv. (1.5 pcs/C)</p> <p>Insert: DNMG150408N-EG (AC5025S) Cutting Conditions: $v_c=35\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=1.6\text{mm}$ Wet</p>	<p>Inconel 718 Aerospace Components S</p> <p>Reduces wear for 1.5x longer tool life</p>  <p>AC5025S+FY (18 pcs/C)</p> <p>Conv. (12 pcs/C)</p> <p>Insert: TNGG160402R-FY (AC5025S) Cutting Conditions: $v_c=37\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=0.1\text{mm}$ Wet</p>
<p>Ni-Based Heat-Resistant Alloy Automotive Components S</p> <p>Enables stable machining for 2x longer tool life</p>  <p>AC5025S+SU (200 pcs/C)</p> <p>Comp's A (S10PVD) (100 pcs/C)</p> <p>Insert: TNGG160402N-SU (AC5025S) Cutting Conditions: $v_c=70\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=0.15\text{mm}$ Wet</p>	<p>Inconel Automotive Components S</p> <p>Reduces wear and extends tool life</p>  <p>AC5025S+SU (200 pcs/C)</p> <p>Conv. (200 pcs/C)</p> <p>Insert: VCMT 080204N-SU (AC5025S) Cutting Conditions: $v_c=49\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet</p>
<p>Hastelloy Aerospace Components S</p> <p>Reduces wear for 4x longer tool life</p>  <p>AC5025S+MU (4 pcs)</p> <p>Comp's B (S10PVD) (1 pcs)</p> <p>Insert: CNMG120412N-MU (AC5025S) Cutting Conditions: $v_c=100\text{m/min}$ $f=0.3\text{mm/rev}$ $a_p=3.0\text{mm}$ Wet</p>	<p>Fe-Based Heat-Resistant Alloy Valve Components S</p> <p>Enables stable machining for 2x longer tool life</p>  <p>AC5025S+EM (2 pcs)</p> <p>Conv. (1 pcs)</p> <p>Insert: WNMG080408N-EM (AC5025S) Cutting Conditions: $v_c=90\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=1.5\text{mm}$ Wet</p>













AC5015S/AC5025S

●Application Examples of AC5025S

<p>SUJ2 Industrial Machine Components P</p> <p>Good wear resistance for 2x longer tool life</p> <p>Output (pcs)</p> <p>AC5025S +FY 1500 Comp's C (P10PVD) 750</p> <p>Insert: TNGG160402R-FY (AC5025S) Cutting Conditions: $v_c=110\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=1.5\text{mm}$ Wet</p>	<p>Heat Resistant Stainless Steel Automotive Components M</p> <p>Stable machining for 2x longer tool life</p> <p>Output (pcs)</p> <p>AC5025S +EG 200 Comp's D (S10PVD) 100</p> <p>Insert: CNMG120408N-EG (AC5025S) Cutting Conditions: $v_c=80\text{m/min}$ $f=0.3\text{mm/rev}$ $a_p=2.0\text{mm}$ Wet</p>
<p>SUS316 Industrial Machine Components M</p> <p>Reduces wear for 1.5x longer tool life</p> <p>Output (pcs)</p> <p>AC5025S +EG 300 Conv. 150</p> <p>Insert: CNMG120408N-EG (AC5025S) Cutting Conditions: $v_c=120\text{m/min}$ $f=0.3\text{mm/rev}$ $a_p=1.5\text{mm}$ Wet</p>	<p>Hardened Steel Industrial Machine Components (49HRC) H</p> <p>Same tool life achieved even at 1.4x higher cutting speed</p> <p>$v_c=350\text{m/min}$ $v_c=250\text{m/min}$</p> <p>AC5025S+MU (After cutting for 65 minutes) Conv. (After cutting for 60 minutes)</p> <p>Insert: CNMG120412N-MU (AC5025S) Cutting Conditions: $v_c=350\text{m/min}$ $f=0.16\text{mm/rev}$ $a_p=1.50\text{mm}$ Dry</p>




AC5015S/AC5025S

Negative 80° Diamond Type

Shape	Cat. No.	Stock		Dimensions (mm)						
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius			
 FL	CNMG 120404N-FL	●	●				0.4			
	120408N-FL	●	●	12.7	4.76	5.16	0.8			
 SU	CNMG 120402N-SU	●	●				0.2			
	120404N-SU	●	●	12.7	4.76	5.16	0.4			
	120408N-SU	●	●				0.8			
	120412N-SU	●	●				1.2			
CNMG 120402N-SU	●	●							0.2	
 SU	120404N-SU	●	●	12.7	4.76	5.16	0.4			
	120408N-SU	●	●				0.8			
	120412N-SU	●	●				1.2			
	CNMG 090404N-EF	●	●							0.4
 EF	090408N-EF	●	●	9.525	4.76	3.81	0.4			
	CNMG 120404N-EF	●	●				0.4			
	120408N-EF	●	●				0.8			
	120412N-EF	●	●				1.2			
 EF	CNMG 120402N-EF	●	●	12.7	4.76	5.16	0.2			
	120404N-EF	●	●				0.4			
	120408N-EF	●	●				0.8			
	120412N-EF	●	●				1.2			
 EX	CNMG 120404N-EX	●	●	12.7	4.76	5.16	0.4			
	120408N-EX	●	●				0.8			
	120412N-EX	●	●				1.2			
	CNMG 160612N-EX	●	●				15.875	6.35	6.35	1.2
 EX	CNMG 190612N-EX	●	●	19.05	6.35	7.94	1.2			
	CNMG 120404N-UP	●	●	12.7	4.76	5.16	0.4			
	120408N-UP	●	●				0.8			
	120412N-UP	●	●				1.2			
CNMG 120404N-GU	●	●	12.7				4.76	5.16	0.4	
120408N-GU	●	●		0.8						
120412N-GU	●	●		1.2						
CNMG 090408N-EG	●	●		9.525	4.76	3.81			0.8	
090412N-EG	●	●	1.2							
CNMG 120404N-EG	●	●	0.4							
120408N-EG	●	●	12.7				4.76	5.16	0.8	
 EG	120412N-EG	●	●	12.7	4.76	5.16	0.8			
	CNMG 160608N-EG	●	●				0.8			
	160612N-EG	●	●				15.875	6.35	6.35	1.2
	160616N-EG	●	●				1.6			
 EG	CNMG 190612N-EG	●	●	19.05	6.35	7.94	1.2			
	190616N-EG	●	●				1.6			
	CNMG 120408N-MU	●	●				12.7	4.76	5.16	0.8
	120412N-MU	●	●							1.2
120416N-MU	●	●	1.6							
CNMG 160608N-MU	●	●	15.875	6.35	6.35	0.8				
160612N-MU	●	●				1.2				
160616N-MU	●	●				1.6				
190612N-MU	●	●				19.05	6.35	7.94	1.2	
190616N-MU	●	●	1.6							
190624N-MU	●	●	2.4							
CNMG 250924N-MU	●	●	25.4	9.52	9.12				2.4	
 MU	CNMG 120408N-EM	●	●	12.7	4.76	5.16	0.8			
	120412N-EM	●	●				1.2			
	120416N-EM	●	●				1.6			
	CNMG 160608N-EM	●	●				15.875	6.35	6.35	0.8
160612N-EM	●	●	1.2							
160616N-EM	●	●	1.6							
CNMG 190612N-EM	●	●	19.05	6.35	7.94	1.2				
190616N-EM	●	●				1.6				
190624N-EM	●	●				2.4				
CNMG 250924N-EM	●	●				25.4	9.52	9.12	2.4	
 EM	CNMG 120408N-UZ	●	●	12.7	4.76	5.16	0.8			
	120412N-UZ	●	●				1.2			
	CNMM 120408N-MP	●	●				12.7	4.76	5.16	0.8
	120412N-MP	●	●							1.2
120416N-MP	●	●	1.6							
CNMM 160608N-MP	●	●	15.875	6.35	6.35	0.8				
160612N-MP	●	●				1.2				
160616N-MP	●	●				1.6				
CNMM 190608N-MP	●	●				19.05	6.35	7.94	0.8	
190612N-MP	●	●	1.2							
190616N-MP	●	●	1.6							
190624N-MP	●	●	2.4							
 MP	CNMA 120408	●	●	12.7	4.76	5.16	0.8			







●mark : Standard stock item

Negative 55° Diamond Type







Shape	Cat. No.	Stock		Dimensions (mm)						
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius			
 SU	DNMG 150402N-SU	●	●	12.7	4.76	5.16	0.2			
	150404N-SU	●	●				0.4			
	150408N-SU	●	●				0.8			
 SU	DNGG 150402N-SU	●	●	12.7	4.76	5.16	0.2			
	150404N-SU	●	●				0.4			
	150408N-SU	●	●				0.8			
 EF	DNMG 110404N-EF	●	●	9.525	4.76	3.81	0.4			
	110408N-EF	●	●				0.8			
	110412N-EF	●	●				1.2			
	DNMG 150404N-EF	●	●				12.7	4.76	5.16	0.4
	150408N-EF	●	●							0.8
	150412N-EF	●	●							1.2
DNMG 150604N-EF	●	●	12.7	6.35	5.16	0.4				
150608N-EF	●	●				0.8				
150612N-EF	●	●				1.2				
DNGG 150404N-EF	●	●				12.7	4.76	5.16	0.4	
150408N-EF	●	●							0.8	
DNMG 150404N-EX	●	●							12.7	4.76
150408N-EX	●	●	0.8							
150412N-EX	●	●	1.2							
DNMG 150404N-UP	●	●	12.7	4.76	5.16					
150408N-UP	●	●				0.8				
150412N-UP	●	●				1.2				
DNMG 150404N-GU	●	●				12.7	4.76	5.16	0.4	
150408N-GU	●	●							0.8	
150412N-GU	●	●							1.2	
DNMG 110408N-EG	●	●	9.525	4.76	3.81				0.8	
110412N-EG	●	●							1.2	
DNMG 150404N-EG	●	●							12.7	4.76
150408N-EG	●	●				0.8				
150412N-EG	●	●				1.2				
DNMG 150604N-EG	●	●				12.7	6.35	5.16		
150608N-EG	●	●	0.8							
150612N-EG	●	●	1.2							
DNMG 150408N-MU	●	●	12.7	4.76	5.16				0.8	
150412N-MU	●	●							1.2	
150416N-MU	●	●							1.6	
DNMG 150408N-EM	●	●				12.7	4.76	5.16	0.8	
150412N-EM	●	●							1.2	
150416N-EM	●	●							1.6	
DNMG 150608N-EM	●	●	12.7	6.35	5.16				0.8	
150612N-EM	●	●							1.2	
150616N-EM	●	●							1.6	
DNMG 150408N-UZ	●	●				12.7	4.76	5.16	0.8	
150412N-UZ	●	●							1.2	
DNMA 150404	●	●							12.7	4.76

AC5015S/AC5025S

○ Negative Square Type

Shape	Cat. No.	Stock		Dimensions (mm)			
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 SU	SNMG 120408N-SU	●	●	12.7	4.76	5.16	0.8
	SNMG 120404N-EF 120408N-EF	●	●	12.7	4.76	5.16	0.4 0.8
 EX	SNMG 120404N-EX 120408N-EX 120412N-EX	●	●	12.7	4.76	5.16	0.4 0.8 1.2
	SNMG 150612N-EX 190612N-EX	●	●	15.875 19.05	6.35 6.35	6.35 7.94	1.2 1.2
	SNMG 120408N-UP 120412N-UP	●	●	12.7	4.76	5.16	0.8 1.2
	SNMG 120404N-GU 120408N-GU 120412N-GU	●	●	12.7	4.76	5.16	0.4 0.8 1.2
 EG	SNMG 120404N-EG 120408N-EG 120412N-EG	●	●	12.7	4.76	5.16	0.4 0.8 1.2
	SNMG 150608N-EG 150612N-EG 150616N-EG	●	●	15.875	6.35	6.35	0.8 1.2 1.6
	SNMG 190612N-EG 190616N-EG	●	●	19.05	6.35	7.94	1.2 1.6
	SNGG 120408R-UM 120408L-UM	●	●	12.7	4.76	5.16	0.8 0.8
	SNMG 120408N-MU 120412N-MU	●	●	12.7	4.76	5.16	0.8 1.2
	SNMG 150608N-MU 150612N-MU 150616N-MU	●	●	15.875	6.35	6.35	0.8 1.2 1.6
 MU	SNMG 190612N-MU 190616N-MU 190624N-MU	●	●	19.05	6.35	7.94	1.2 1.6 2.4
	SNMG 250924N-MU	●	●	25.4	9.52	9.12	2.4
	SNMG 120408N-EM 120412N-EM	●	●	12.7	4.76	5.16	0.8 1.2
	SNMG 150608N-EM 150612N-EM 150616N-EM	●	●	15.875	6.35	6.35	0.8 1.2 1.6
	SNMG 190612N-EM 190616N-EM 190624N-EM	●	●	19.05	6.35	7.94	1.2 1.6 2.4
	SNMG 250924N-EM	●	●	25.4	9.52	9.12	2.4
 UZ	SNMG 120408N-UZ 120412N-UZ	●	●	12.7	4.76	5.16	0.8 1.2
	SNMM 120408N-MP 120412N-MP 120416N-MP	●	●	12.7	4.76	5.16	0.8 1.2 1.6
 MP	SNMM 190612N-MP 190616N-MP	●	●	19.05	6.35	7.94	1.2 1.6








△ Negative Triangular Type

Shape	Cat. No.	Stock		Dimensions (mm)			
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 SU	TNMG 160402N-SU 160404N-SU 160408N-SU	●	●	9.525	4.76	3.81	0.2 0.4 0.8
	TNMG 160412N-SU	●	●	9.525	4.76	3.81	1.2
	TNGG 160402N-SU 160404N-SU 160408N-SU	●	●	9.525	4.76	3.81	0.2 0.4 0.8
 EF	TNMG 160404N-EF 160408N-EF	●	●	9.525	4.76	3.81	0.4 0.8
	TNGG 160402R-FY 160402L-FY 160404R-FY 160404L-FY	●	●	9.525	4.76	3.81	0.2 0.2 0.4 0.4
 FX	TNMG 160402R-FX 160402L-FX 160404R-FX 160404L-FX	●	●	9.525	4.76	3.81	0.2 0.2 0.4 0.4
	TNMG 160404N-EX 160408N-EX 160412N-EX	●	●	9.525	4.76	3.81	0.4 0.8 1.2
	TNMG 160404N-UP 160408N-UP 160412N-UP	●	●	9.525	4.76	3.81	0.4 0.8 1.2
	TNMG 220408N-UP	●	●	12.7	4.76	5.16	0.8
 GU	TNMG 160404N-GU 160408N-GU 160412N-GU	●	●	9.525	4.76	3.81	0.4 0.8 1.2
	TNMG 160404N-EG 160408N-EG 160412N-EG	●	●	9.525	4.76	3.81	0.4 0.8 1.2
	TNMG 160408N-MU 160412N-MU	●	●	9.525	4.76	3.81	0.8 1.2
 EM	TNMG 220408N-MU	●	●	12.7	4.76	5.16	0.8
	TNMG 160408N-EM 160412N-EM	●	●	9.525	4.76	3.81	0.8 1.2
	TNMG 330924N-EM	●	●	19.05	9.52	7.93	2.4
 HM	TNMG 160404R-HM 160404L-HM 160408R-HM 160408L-HM	●	●	9.525	4.76	3.81	0.4 0.4 0.8 0.8
	TNMA 160404 160408	●	●	9.525	4.76	3.81	0.4 0.8
	TNGA 160404	●	●	9.525	4.76	3.81	0.4


●mark : Standard stock item

AC5015S/AC5025S










Negative 35° Diamond Type

Shape	Cat. No.	Stock		Dimensions (mm)			
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 SU	VNMG 160402N-SU	●	●				0.2
	160404N-SU	●	●	9.525	4.76	3.81	0.4
	160408N-SU	●	●				0.8
 EF	VNMG 160402N-EF	●	●				0.2
	160404N-EF	●	●	9.525	4.76	3.81	0.4
	160408N-EF	●	●				0.8
 VNGG	160402N-EF	●	●	9.525	4.76	3.81	0.2
	160404N-EF	●	●				0.4
 EX	VNMG 160404N-EX	●	●	9.525	4.76	3.81	0.4
	160408N-EX	●	●				0.8
 GU	VNMG 160404N-GU	●	●				0.4
	160408N-GU	●	●	9.525	4.76	3.81	0.8
	160412N-GU	●	●				1.2
 EG	VNMG 160404N-EG	●	●				0.4
	160408N-EG	●	●	9.525	4.76	3.81	0.8
	160412N-EG	●	●				1.2
 UZ	VNMG 160404N-UZ	●	●	9.525	4.76	3.81	0.4
	160408N-UZ	●	●				0.8

Negative Square Type (Without Insert Hole)





Shape	Cat. No.	Stock		Dimensions (mm)			
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 SNMN	120408	●	●				0.8
	120412	●	●	12.7	4.76	-	1.2
	120416	●	●				1.6

Negative Trigon Type




Shape	Cat. No.	Stock		Dimensions (mm)			
		AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 SU	WNMG 080404N-SU	●	●				0.4
	080408N-SU	●	●	12.7	4.76	5.16	0.8
	080412N-SU	●	●				1.2
 EF	WNMG 060404N-EF	●	●	9.525	4.76	3.81	0.4
	060408N-EF	●	●				0.8
	WNMG 080404N-EF	●	●				0.4
 EX	080408N-EF	●	●	12.7	4.76	5.16	0.8
	WNMG 080404N-EX	●	●				0.4
	080408N-EX	●	●	12.7	4.76	5.16	0.8
 UP	080412N-EX	●	●				1.2
	WNMG 080408N-UP	●	●	12.7	4.76	5.16	0.8
	080412N-UP	●	●				1.2
 GU	WNMG 080404N-GU	●	●				0.4
	080408N-GU	●	●	12.7	4.76	5.16	0.8
	080412N-GU	●	●				1.2
 EG	WNMG 060408N-EG	●	●	9.525	4.76	3.81	0.8
	060412N-EG	●	●				1.2
	WNMG 080404N-EG	●	●				0.4
 MU	080408N-EG	●	●	12.7	4.76	5.16	0.8
	080412N-EG	●	●				1.2
	WNMG 080408N-MU	●	●	12.7	4.76	5.16	0.8
 EM	080412N-MU	●	●				1.2
	WNMG 080408N-EM	●	●	12.7	4.76	5.16	0.8
 UZ	080412N-EM	●	●				1.2
	WNMG 080404N-UZ	●	●				0.4
	080408N-UZ	●	●	12.7	4.76	5.16	0.8
	080412N-UZ	●	●				1.2

New coated grades for Exotic alloy turning
AC5015S/AC5025S



Positive 80° Diamond Type

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)			
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 SU	7°	CCMT 060208N-SU	●	●	6.35	2.38	2.8	0.8
 SI	7°	CCGT 09T301MN-SI	●	●	9.525	3.97	4.4	<0.1
		09T302MN-SI	●	●				<0.2
		09T304MN-SI	●	●				<0.4
 GU	7°	CCMT 060204N-GU	●	●	6.35	2.38	2.8	0.4
		060208N-GU	●	●				0.8
 SD	11°	CPGT 080202N-SD	●	●	7.94	2.38	3.4	0.2
		080204N-SD	●	●				0.4
		080208N-SD	●	●				0.8
	11°	CPGT 090302N-SD	●	●	9.525	3.18	4.4	0.2
		090304N-SD	●	●				0.4
		090308N-SD	●	●				0.8
	11°	CPGT 120402N-SD	●	●	12.7	4.76	5.5	0.2
		120404N-SD	●	●				0.4
		120408N-SD	●	●				0.8









Positive 55° Diamond Type

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)			
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 FC	7°	DCGT 070201MN-FC	●	●	6.35	2.38	2.8	<0.1
		070202MN-FC	●	●				<0.2
		070204MN-FC	●	●				<0.4
	7°	DCGT 11T301MN-FC	●	●	9.525	3.97	4.4	<0.1
		11T302MN-FC	●	●				<0.2
		11T304MN-FC	●	●				<0.4
 FX	7°	DCGT 0702003R-FX	●	●	6.35	2.38	2.8	0.03
		0702003L-FX	●	●				0.03
		070201R-FX	●	●				0.1
		070201L-FX	●	●				0.1
		070202R-FX	●	●				0.2
		070202L-FX	●	●				0.2
	7°	DCGT 11T3003R-FX	●	●	9.525	3.97	4.4	0.03
		11T3003L-FX	●	●				0.03
		11T301R-FX	●	●				0.1
		11T301L-FX	●	●				0.1
		11T302R-FX	●	●				0.2
		11T302L-FX	●	●				0.2
 FY	7°	DCGT 0702003R-FY	●	●	6.35	2.38	2.8	0.03
		0702003L-FY	●	●				0.03
		070201R-FY	●	●				0.1
		070201L-FY	●	●				0.1
		070202R-FY	●	●				0.2
		070202L-FY	●	●				0.2
		070204R-FY	●	●				0.4
		070204L-FY	●	●				0.4
		DCGT 11T3003R-FY	●	●				9.525
	11T3003L-FY	●	●	0.03				
	11T301R-FY	●	●	0.1				
	11T301L-FY	●	●	0.1				
	11T302R-FY	●	●	0.2				
	11T302L-FY	●	●	0.2				
	11T304R-FY	●	●	0.4				
	11T304L-FY	●	●	0.4				
	7°	DCGT 070201MN-SI	●	●	6.35	2.38	2.8	
		070202MN-SI	●	●				<0.2
070204MN-SI		●	●	<0.4				
7°		DCGT 11T301MN-SI	●	●	9.525	3.97	4.4	<0.1
		11T302MN-SI	●	●				<0.2
		11T304MN-SI	●	●				<0.4
		11T308MN-SI	●	●				<0.8

Positive Round Type

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)			
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
 RP	7°	RCMX 1204M0N-RP	●	●	12.0	4.76	4.2	-
		RCMX 2006M0N-RP	●	●	20.0	6.35	6.5	-
 RPGW	11°	RPGW 0803M0	●	●	8.0	3.18	3.3	-
		RPGW 1004M0	●	●	10.0	4.76	3.8	-
		RPGW 1204M0	●	●	12.0	4.76	4.3	-

Positive Triangular Type


Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)								
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius					
 FX	5°	TBGT 060102R-FX	●	●	3.97	1.59	2.2	0.2					
		060102L-FX	●	●				0.2					
		060104R-FX	●	●				0.4					
		060104L-FX	●	●				0.4					
 SU	7°	TCMT 110204N-SU	●	●	6.35	2.38	2.8	0.4					
		110208N-SU	●	●				0.8					
 SI	7°	TCGT 110204MN-SI	●	●	6.35	2.38	2.8	<0.4					
 FC	11°	TPGT 110302MN-FC	●	●	6.35	3.18	3.4	<0.2					
		110304MN-FC	●	●				<0.4					
 FX	11°	TPGT 080202R-FX	●	●	4.76	2.38	2.4	0.2					
		080202L-FX	●	●				0.2					
		080204R-FX	●	●				0.4					
		080204L-FX	●	●				0.4					
		TPGT 110202R-FX	●	●				6.35	2.38	2.8	0.2		
		110202L-FX	●	●							0.2		
	110204R-FX	●	●	0.4									
	110204L-FX	●	●	0.4									
	110208R-FX	●	●	0.8									
	110208L-FX	●	●	0.8									
	11°	TPGT 110302R-FX	●	●	6.35	3.18	3.4	0.2					
		110302L-FX	●	●				0.2					
		110304R-FX	●	●				0.4					
		110304L-FX	●	●				0.4					
		110308R-FX	●	●				0.8					
		110308L-FX	●	●				0.8					
		 FY	11°	TPGT 0802003R-FY				●	●	4.76	2.38	2.4	0.03
				0802003L-FY				●	●				0.03
080201R-FY				●				●	0.1				
080201L-FY				●				●	0.1				
080202R-FY				●				●	0.2				
080202L-FY				●				●	0.2				
080204R-FY	●			●	0.4								
080204L-FY	●			●	0.4								
TPGT 1103003R-FY	●			●	6.35	3.18	3.4	0.03					
1103003L-FY	●		●	0.03									
110301R-FY	●		●	0.1									
110301L-FY	●		●	0.1									
110302R-FY	●		●	0.2									
110302L-FY	●		●	0.2									
110304R-FY	●		●	0.4									
110304L-FY	●		●	0.4									
110308R-FY	●		●	0.8									
110308L-FY	●		●	0.8									
 SD	11°	TPGT 110304L-SD	●	●	6.35	3.18	3.4	0.4					
		TPGT 160404L-SD	●	●	9.525	4.76	4.4	0.4					
 TPGW	11°	TPGW 110304	●	●	6.35	3.18	3.4	0.4					
		TPGW 160404	●	●	9.525	4.76	4.4	0.4					

Values for nose radius prefixed with "<" mean minus tolerances.


●mark : Standard stock item ●mark: Standard stocked item (expanded item) Blank: Made-to-order item

AC5015S/AC5025S



Positive 35° Diamond Type

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)						
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius			
	5°	VBGT 110301MN-SI	●	●	6.35	3.18	2.8	<0.1			
		110302MN-SI	●	●				<0.2			
		110304MN-SI	●	●				<0.4			
SI	5°	VBGT 110308MN-SI	●	●	9.525	4.76	4.4	<0.8			
		VBGT 160401MN-SI	●	●				<0.1			
		160402MN-SI	●	●				<0.2			
		160404MN-SI	●	●				<0.4			
FC	7°	VCMT 160408MN-SI	●	●	9.525	4.76	4.4	<0.8			
		VCGT 080204MN-FC	●	●				4.76	2.38	2.3	<0.4
		VCGT 110301MN-FC	●	●				6.35	3.18	2.8	<0.1
		110302MN-FC	●	●				6.35	3.18	2.8	<0.2
FX	7°	110304MN-FC	●	●	6.35	3.18	2.8	<0.4			
		VCGT 110301R-FX	●	●				0.1			
		110301L-FX	●	●				0.1			
		110302R-FX	●	●				0.2			
FY	7°	110302L-FX	●	●	6.35	3.18	2.8	0.2			
		VCGT 110301R-FY	●	●				0.1			
		110301L-FY	●	●				0.1			
		110302R-FY	●	●				0.2			
SU	7°	110302L-FY	●	●	6.35	3.18	2.8	0.2			
		VCMT 160404N-SU	●	●				9.525	4.76	4.4	0.4
		160408N-SU	●	●				9.525	4.76	4.4	0.8
		VCGT 110301MN-SI	●	●				6.35	3.18	2.8	<0.1
110302MN-SI	●	●	<0.2								
110304MN-SI	●	●	<0.4								
110308MN-SI	●	●	<0.8								
SI	7°	VCGT 160401MN-SI	●	●	9.525	4.76	4.4	<0.1			
		160402MN-SI	●	●				<0.2			
		160404MN-SI	●	●				<0.4			
		160408MN-SI	●	●				<0.8			
GU	7°	VCMT 160404N-GU	●	●	9.525	4.76	4.4	0.4			
		160408N-GU	●	●				0.8			



Positive Trigon Type

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)			
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
	5°	WBGT 060102L-FX	●	●	3.97	1.59	2.2	0.2
		060104L-FX	●	●				0.4

Square Type (Without Insert Hole)

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)			
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
	11°	SPMN 120308	●	●	12.7	3.18	-	0.8
		120312	●	●				1.2
	11°	SPMN 150408	●	●	15.875	4.76	-	0.8
		SPGN 090308	●	●	9.525	3.18	-	0.8
		SPGN 120304	●	●				0.4
		120308	●	●	12.7	3.18	-	0.8

Triangular Type (Without Insert Hole)

Shape	Relief angle	Cat. No.	Stock		Dimensions (mm)			
			AC5015S	AC5025S	Inscribed circle	Thickness	Hole	Nose radius
	11°	TPMN 110304	●	●	6.35	3.18	-	0.4
		110308	●	●				0.8
		TPMN 160304	●	●				9.525
160308	●	●	0.8					
	11°	TPMN 220408	●	●	12.7	4.76	-	0.8
		220412	●	●				1.2
		TPGN 110304	●	●				6.35
	11°	TPGN 160304	●	●	9.525	3.18	-	0.4
		160308	●	●				0.8
		TPGN 220408	●	●				12.7

Values for nose radius prefixed with "<" mean minus tolerances.

●mark : Standard stock item ●mark : Standard stocked item (expanded item) Blank: Made-to-order item

AC5015S/AC5025S

● Recommended Cutting Conditions

(Red text indicates 1st recommendation.)

Work Material	Cutting State	Chipbreaker	Grade	Cutting Conditions <small>Min. - Optimum - Max.</small>		
				Depth of Cut a_p (mm)	Feed Rate f (mm/rev)	Cutting Speed v_c (m/min)
Heat Resistant Alloy (Ni Base Material Fe Base Material Co Base Material)	Finishing	EF	AC5015S AC5025S	0.2 - 0.5 - 1.5	0.10 - 0.12 - 0.20	50 - 70 - 110
	Light	EX	AC5015S AC5025S	0.5 - 1.0 - 3.0	0.10 - 0.20 - 0.30	40 - 60 - 90
	Medium	EG	AC5015S AC5025S	0.5 - 2.0 - 4.0	0.15 - 0.25 - 0.30	40 - 60 - 90
	Rough	EM	AC5015S AC5025S	1.0 - 2.0 - 4.0	0.20 - 0.25 - 0.40	30 - 55 - 80



- Very hot or lengthy chips may be discharged while the machine is in operation. Therefore, machine guards, safety goggles or other protective covers must be used. Fire safety precautions must also be considered.

< SAFETY NOTES >

- Please handle with care as this product has sharp edges.
- Improper cutting conditions or mis-handling of the tool may result in breakages or projectiles. Therefore, please use the tool within its recommended conditions.

- When using non-water soluble cutting oil, precautions against fire must be taken and please ensure that a fire extinguisher is placed near the machine.

 **Sumitomo Electric Industries, Ltd.**

Hardmetal Division

Global Marketing Department : 1-1-1, Koyakita, Itami, Hyogo 664-0016, Japan

Tel: +81-72-772-4535 Fax: +81-72-771-0088

<https://www.sumitool.com/global>