

AC5005S / AC5015S / AC5025S

Rev. 5



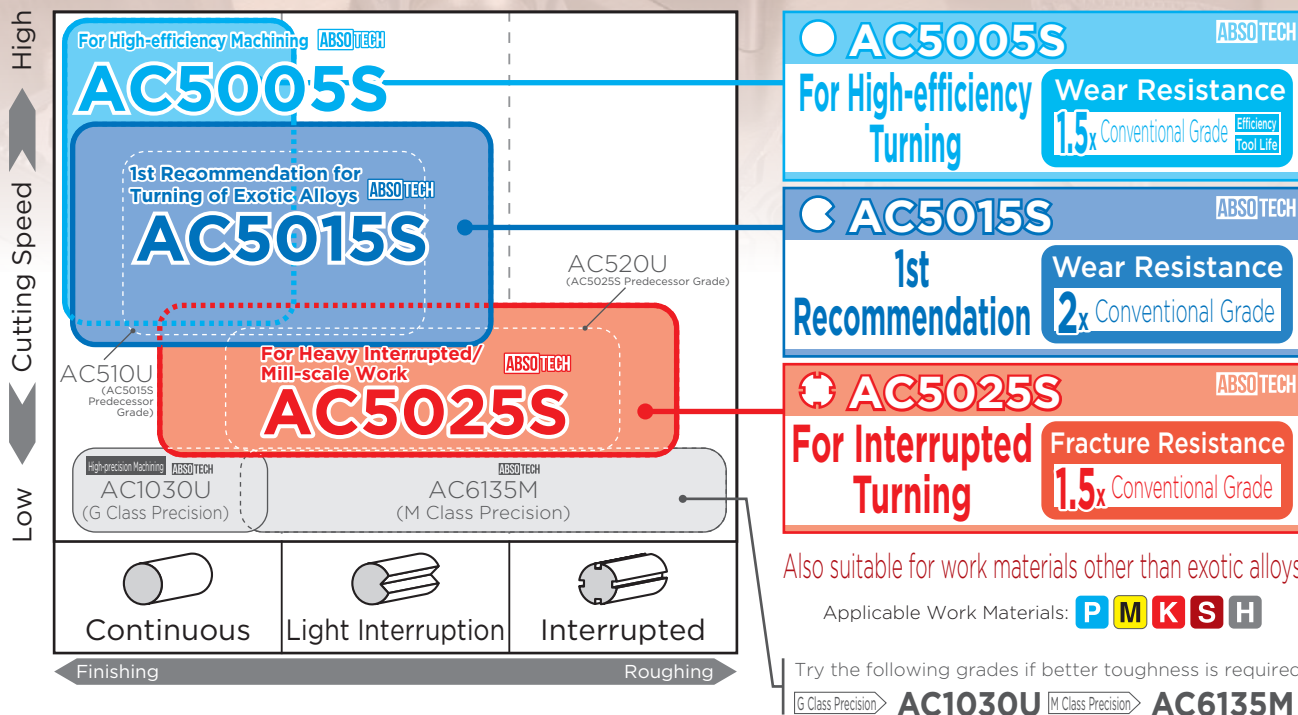
New grade for exotic alloy turning,
creating **"ABSOLUTELY STABLE CUTTING"**

For SBT series / PBT series For GWC series For GNDIS type For STF type / WCF type

New For SEC-MINI Tool Holders SBT series / PBT series
For SEC-Grooving Tools GWC series / GNDIS type
For SEC-Cut-off Tool Holders STF type / WCF type
Inserts available as a series Total 98 items

AC5005S / AC5015S / AC5025S

Application Range



Features of AC5000S series



PVD Coating Technology ABSOTECH™

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

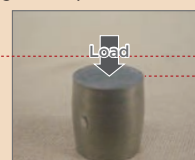
Newly Developed Tough Carbide Substrate

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



Newly Developed Heat-Resistant Carbide Substrate AC5005S

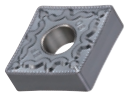
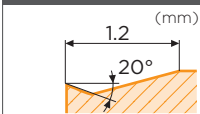
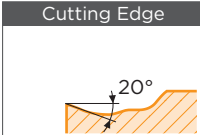
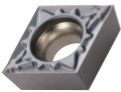
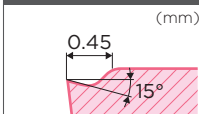
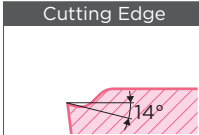
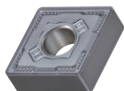
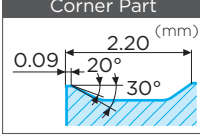
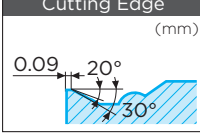
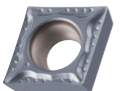
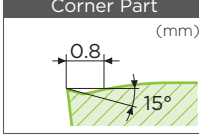
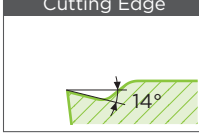
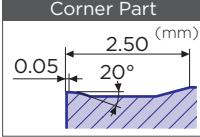
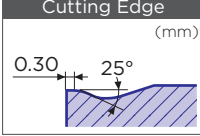
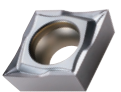
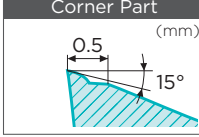
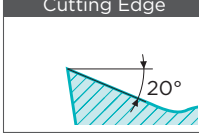
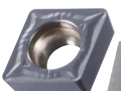
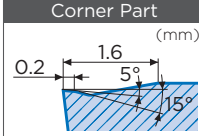
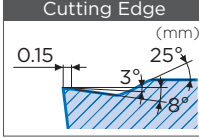
Achieving excellent wear and plastic deformation resistance during high-efficiency turning with a newly developed dedicated substrate that has excellent high temperature hardness and strength.



Deformation at high temperatures
50% Down from Conventional Grade

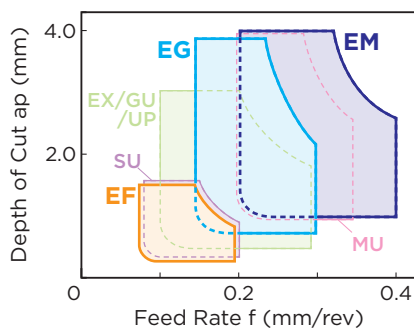
(High-temperature deformation evaluation 800°C)

■ Chipbreaker Selection

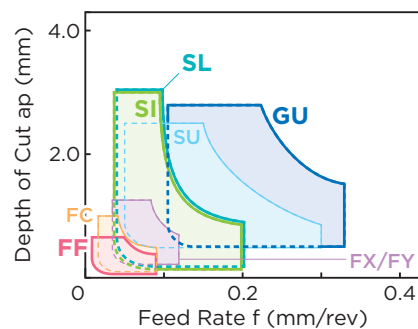
Negative			Positive		
EF type For Finishing	Chipbreaker Cross Section (CNMG120400 type)	FF type For Fine Cutting to Finishing	Chipbreaker Cross Section (CCGT09T300 type)		
 Main chipbreaker exhibits excellent chip evacuation performance even with small depths of cut Cutting edge designed with an emphasis on sharpness (20° rake angle) to suppress wear Grooved rake face suppresses heat generation and uneven contact	Corner Part  1.2 (mm) 20° Cutting Edge  20°	 Slanted cutting edge and chip pocket design prevent chips from overflowing the breaker wall Protrusion design enables chip control in fine cutting	Corner Part  0.45 (mm) 15° Cutting Edge  14°		
EG type For Medium Cutting to Roughing	Chipbreaker Cross Section (CNMG120400 type)	SI type For Finishing to Light Cutting	Chipbreaker Cross Section (CCGT09T300 type)		
 Spherical protrusions exhibit excellent chip control performance over a wide range of conditions Cutting edge shape that retains its strength even after wear progresses	Corner Part  0.09 (mm) 2.20 (mm) 20° 30° Cutting Edge  0.09 (mm) 20° 30°	 Dimpled shape suppresses heat generation due to large depths of cut Cutting edge designed with an emphasis on sharpness (15° rake angle) Cutting edge shape intended to improve profiling and reduce cutting force	Corner Part  0.8 (mm) 15° Cutting Edge  14°		
EM type For Roughing	Chipbreaker Cross Section (CNMG120400 type)	SL type For Light to Medium Cutting	Chipbreaker Cross Section (CCGT09T300 type)		
 Large convex rake face design keeps its cutting edge strength while suppressing crater wear Suppresses notch wear by eliminating the change of cutting points on the cutting edge	Corner Part  0.05 (mm) 2.50 (mm) 20° Cutting Edge  0.30 (mm) 25°	 Protrusion suppresses cutting force while controlling chips Sharp rake shape Slanted cutting edge realises smooth engagement and exhibits good cutting performance even in vibrating cutting	Corner Part  0.5 (mm) 15° Cutting Edge  20°		
			GU type For Light to Medium Cutting	Chipbreaker Cross Section (CCMT060200 type)	
			 Suppresses chip build-up at high feed rates for ideal chip control Protrusion design controls chip flow Rake face shape with excellent balance of sharpness and strength	Corner Part  0.2 (mm) 1.6 (mm) 5° 15° Cutting Edge  0.15 (mm) 3° 25° 8°	

■ Chipbreaker Application Range

Negative



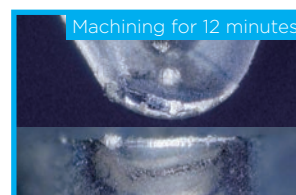
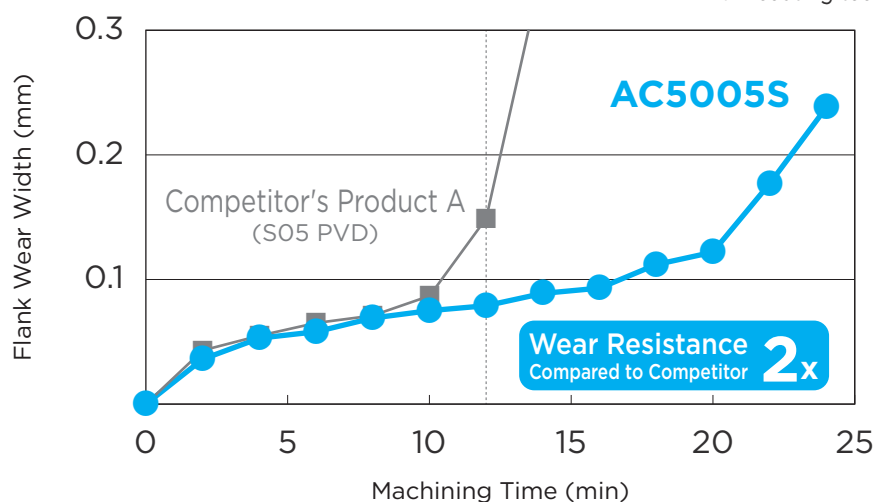
Positive



AC5005S/AC5015S/AC5025S

AC5005S Wear Resistance Comparison (High-speed)

Newly developed heat-resistant carbide substrate and PVD coating technology ABSOTECH™ suppress wear



AC5005S

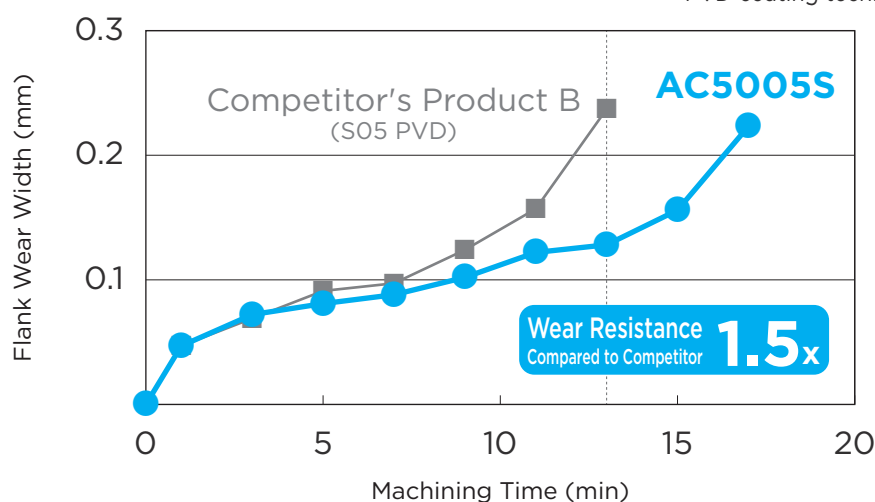


Competitor's Product A

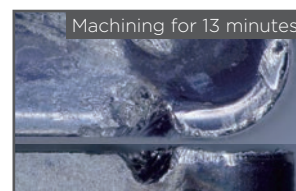
Work Material: Inconel 718 (44HRC) Insert: DNMG150408 Cutting Conditions: $v_c = 100\text{m/min}$ $f = 0.15\text{mm/rev}$ $a_p = 0.50\text{mm}$ Wet

AC5005S Wear Resistance Comparison (High-feed)

Newly developed heat-resistant carbide substrate and PVD coating technology ABSOTECH™ suppress wear



AC5005S

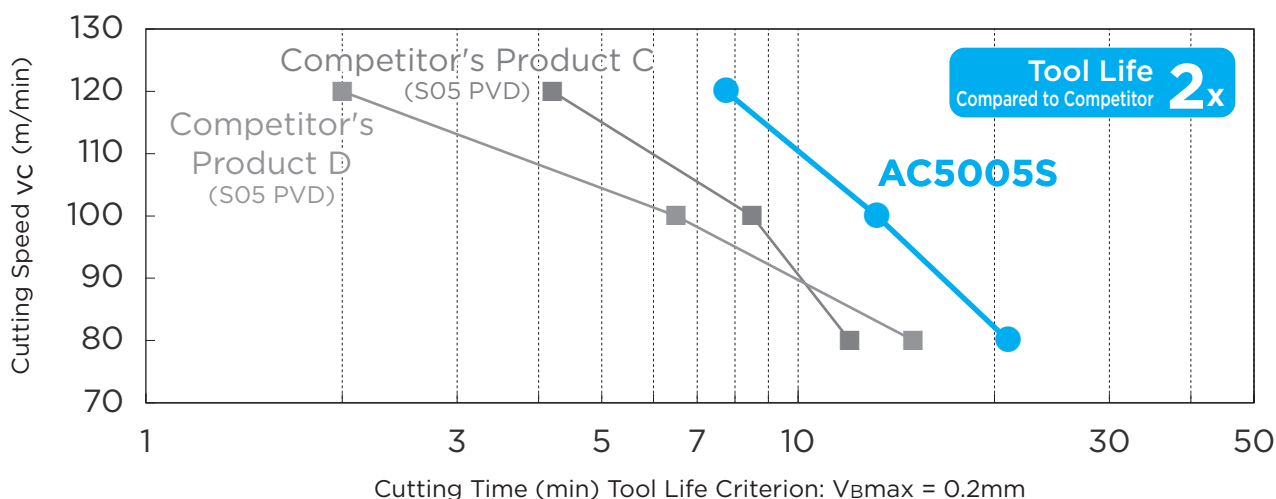


Competitor's Product B

Work Material: Inconel 718 (44HRC) Insert: CNMG120408 Cutting Conditions: $v_c = 50\text{m/min}$ $f = 0.25\text{mm/rev}$ $a_p = 1.50\text{mm}$ Wet

AC5005S Tool Life (V-T Chart (High-speed))

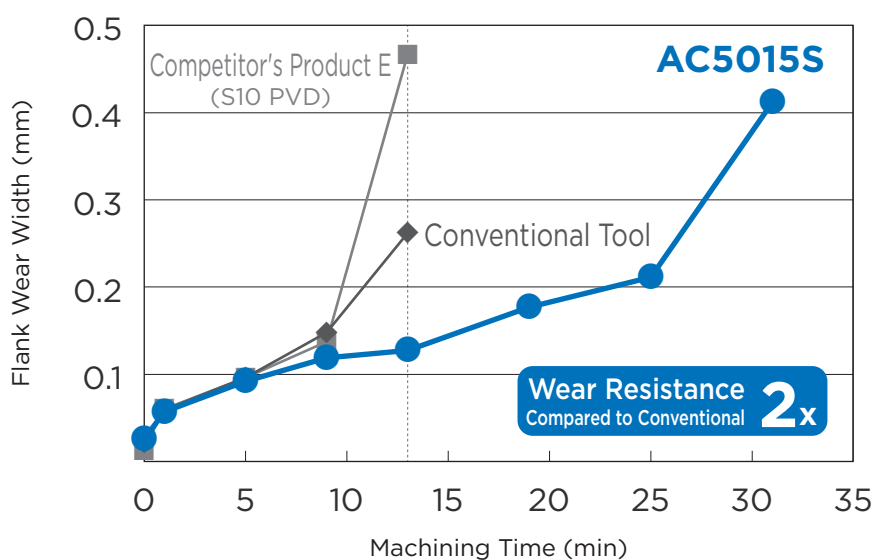
2x longer tool life in high-speed turning



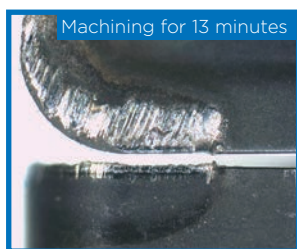
Work Material: Inconel 718 (45HRC) Insert: CNMG120408 Cutting Conditions: $f = 0.15\text{mm/rev}$ $a_p = 0.50\text{mm}$ Wet

AC5005S/AC5015S/AC5025S

■ AC5015S Wear Resistance Comparison PVD coating technology ABSOTECH™ suppresses wear



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



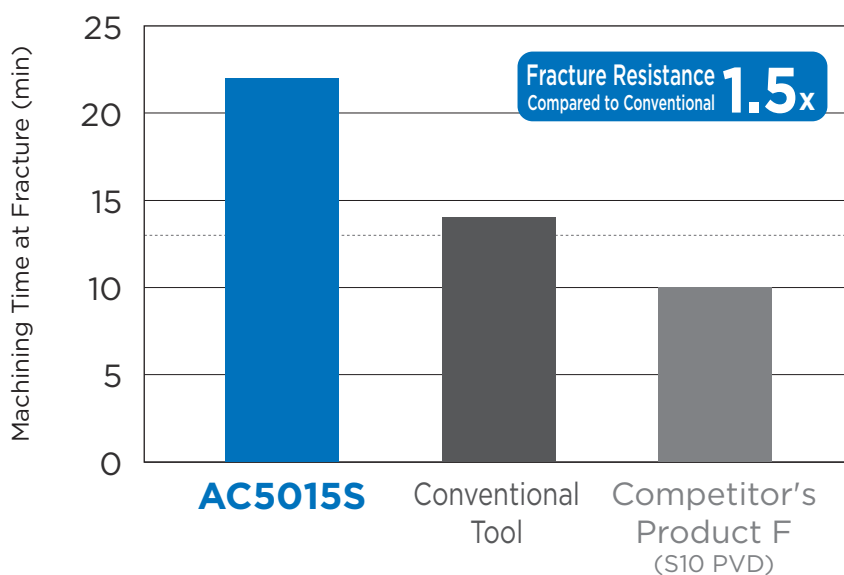
AC5015S



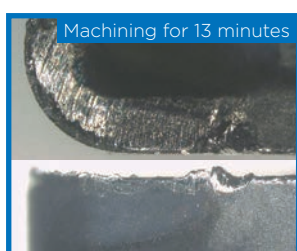
Conventional Tool

Competitor's Product E
(S10 PVD)

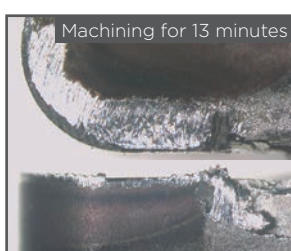
■ AC5015S Fracture Resistance Comparison Newly developed tough substrate suppresses notch wear



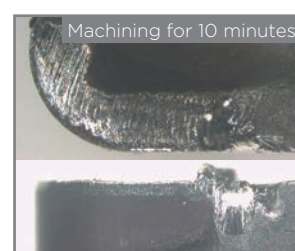
Work Material: Hastelloy
(22HRC)
Insert: CNMG120408
Cutting Conditions: $v_c = 50\text{m/min}$
 $f = 0.1\text{mm/rev}$
 $a_p = 1.5\text{mm}$
Wet



AC5015S

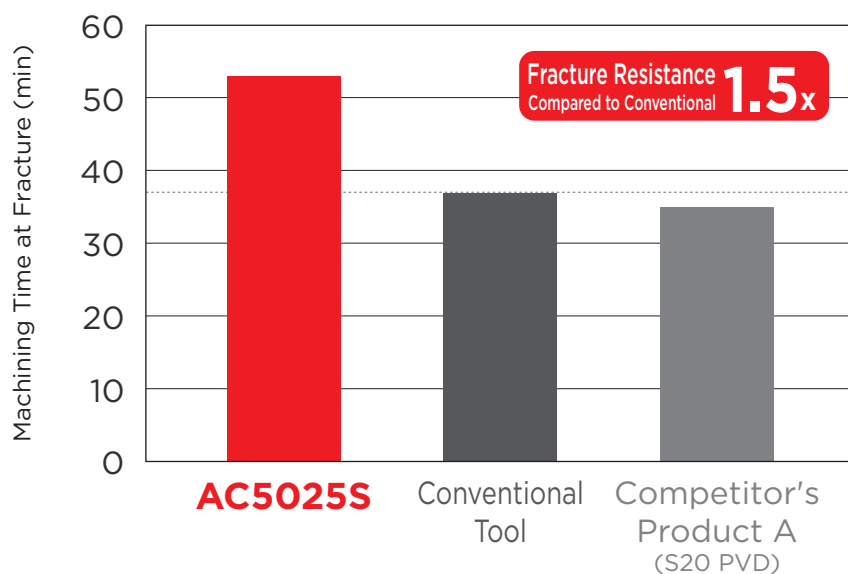


Conventional Tool

Competitor's Product F
(S10 PVD)

AC5005S/AC5015S/AC5025S

■ AC5025S Fracture Resistance Comparison Newly developed tough substrate suppresses notch wear



Work Material: Hastelloy
(22HRC)

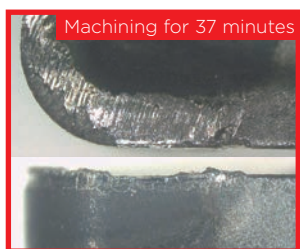
Insert: CNMG120408

Cutting Conditions: $vc = 50\text{m/min}$

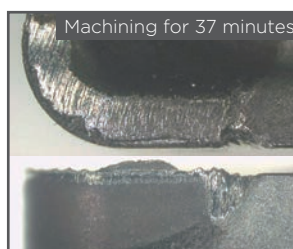
$f = 0.1\text{mm/rev}$

$ap = 1.5\text{mm}$

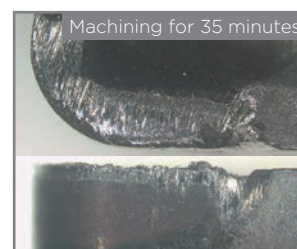
Wet



AC5025S

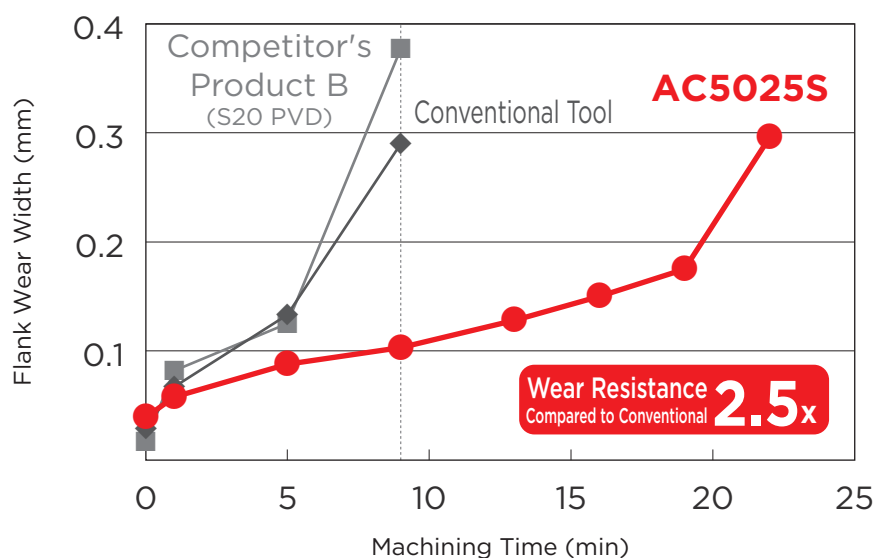


Conventional Tool



Competitor's Product A
(S20 PVD)

■ AC5025S Wear Resistance Comparison PVD coating technology ABSOTECH™ suppresses wear



Work Material: Inconel 718
(44HRC)

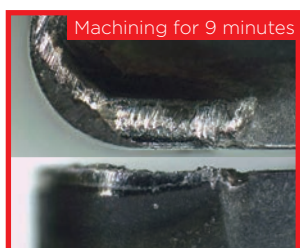
Insert: CNMG120408

Cutting Conditions: $vc = 40\text{m/min}$

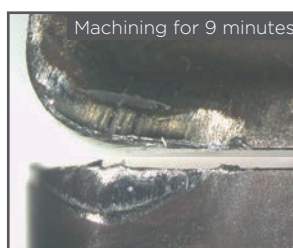
$f = 0.1\text{mm/rev}$

$ap = 1.5\text{mm}$

Wet



AC5025S



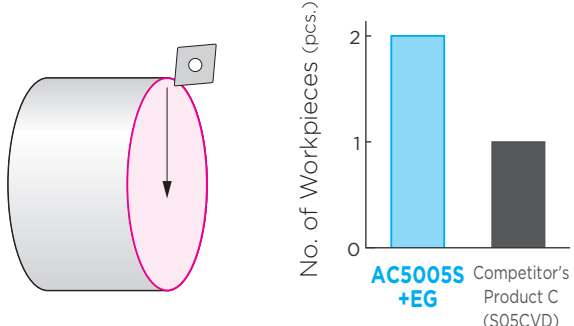
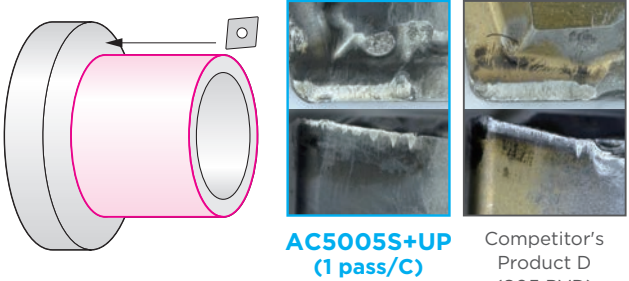
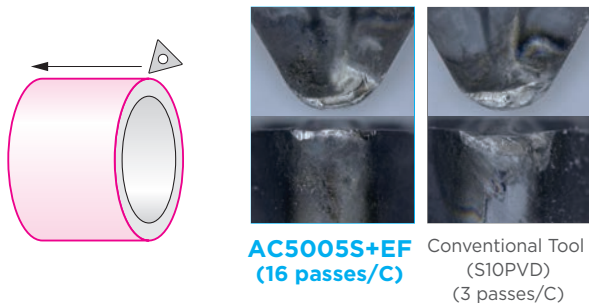
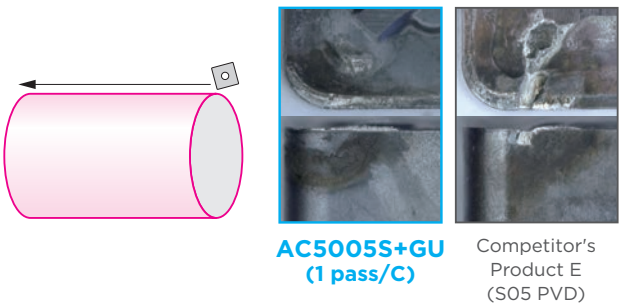
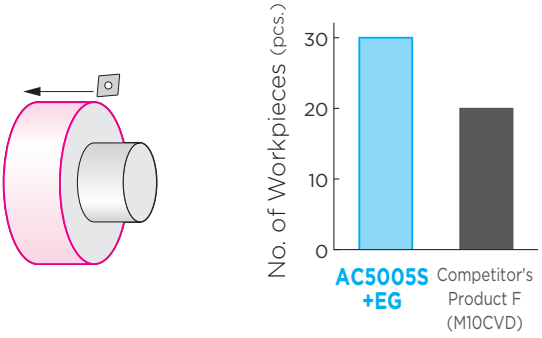
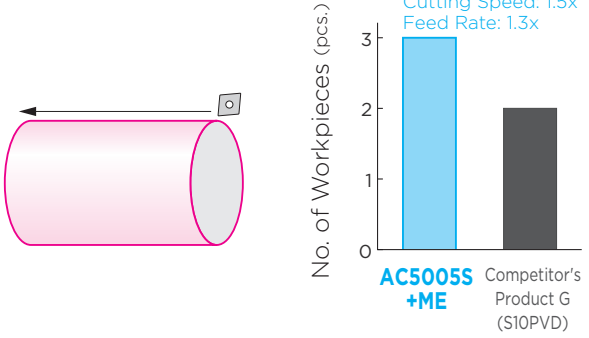
Conventional Tool



Competitor's Product B
(S20 PVD)

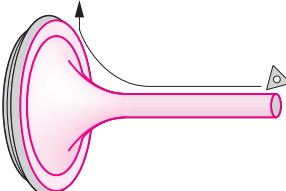
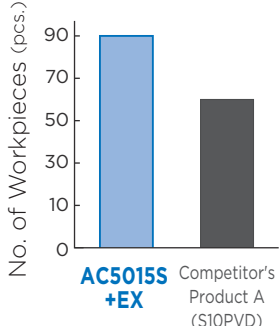
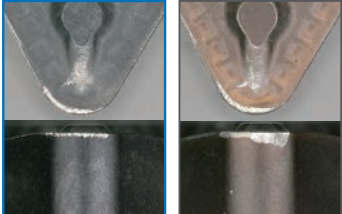
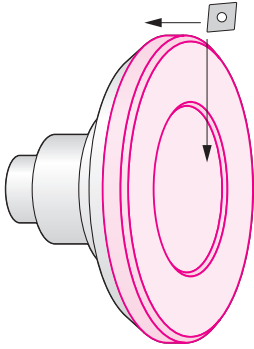
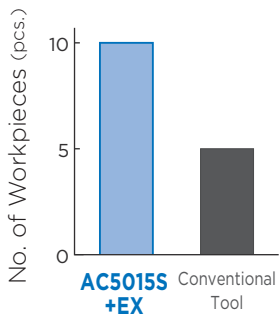
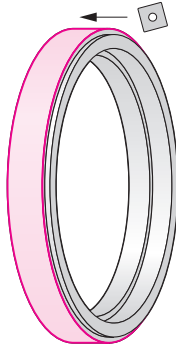
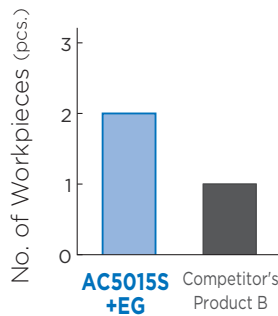
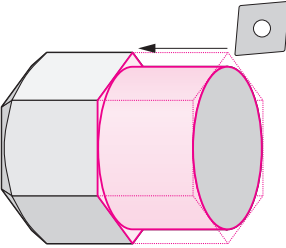
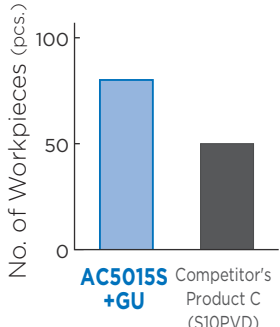
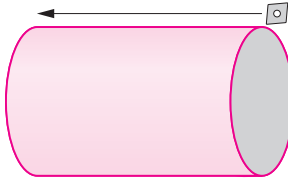
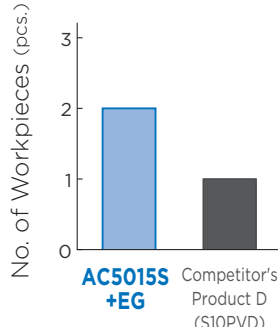
AC5005S/AC5015S/AC5025S

■ Application Examples of AC5005S

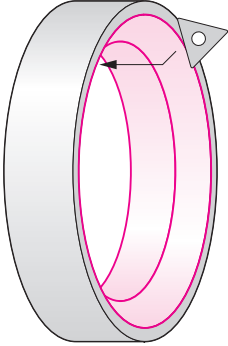
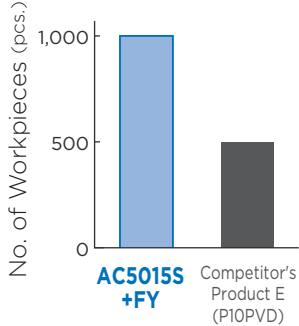
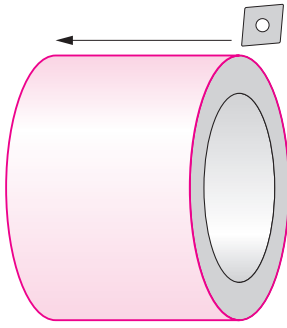
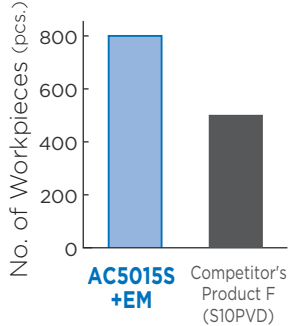
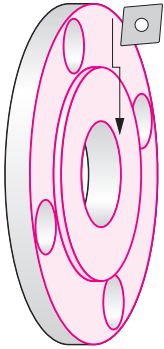
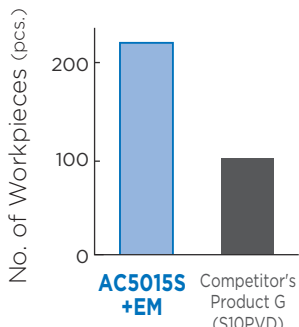
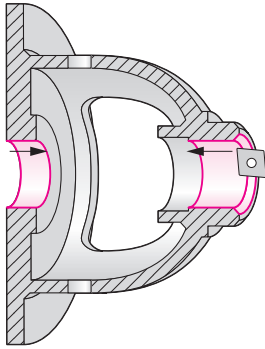
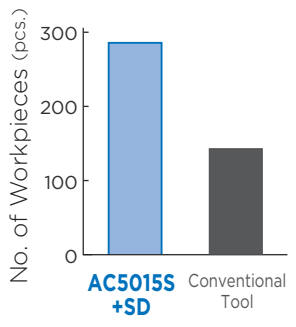
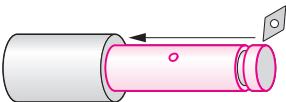
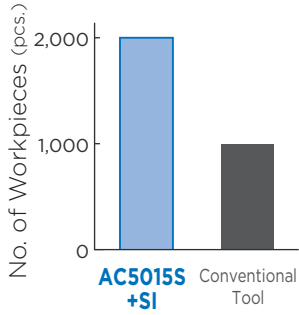
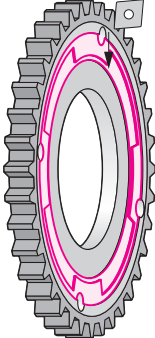
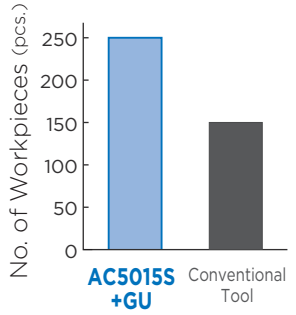
Inconel 718 Aerospace Component S Good wear resistance with 2x longer tool life  Tool: CNMG190616N-EG (AC5005S) Cutting Conditions: $vc = 55\text{m/min}$ $f = 0.3\text{mm/rev}$ $ap = 3.0\text{mm}$ Wet	Inconel 718 Aerospace Component S Suppresses wear and extends tool life  Tool: CNMG120408N-UP (AC5005S) Cutting Conditions: $vc = 45\text{m/min}$ $f = 0.15\text{mm/rev}$ $ap = 3.2\text{mm}$ Wet
Ni-based Heat-Resistant Alloy Industrial Machine Component S Good wear resistance with at least 5x longer tool life  Tool: TNMG160408N-EF (AC5005S) Cutting Conditions: $vc = 30\text{m/min}$ $f = 0.13\text{mm/rev}$ $ap = 0.8\text{mm}$ Wet	Hardened Steel Industrial Machine Component (50 to 55HRC) H Good wear resistance with 13% reduced machining time and extended tool life Cutting Speed: 1.1x  Tool: SNMG120412N-GU (AC5005S) Cutting Conditions: $vc = 51\text{m/min}$ $f = 0.4\text{mm/rev}$ $ap = 1.4\text{mm}$ Wet
15-5 PH Stainless Steel Industrial Machine Component M Good wear resistance with 1.4x longer tool life  Tool: CNMG120408N-EG (AC5005S) Cutting Conditions: $vc = 100\text{m/min}$ $f = 0.2\text{mm/rev}$ $ap = 0.6\text{mm}$ Wet	15-5 PH Stainless Steel Aerospace Component M Good wear resistance with 66% reduced machining time and 1.5x longer tool life Cutting Speed: 1.5x Feed Rate: 1.3x  Tool: CNMG120412N-ME (AC5005S) Cutting Conditions: $vc = 55\text{m/min}$ $f = 0.36\text{mm/rev}$ $ap = 2.5\text{mm}$ Wet

AC5005S/AC5015S/AC5025S

■ Application Examples of AC5015S

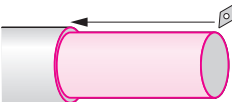
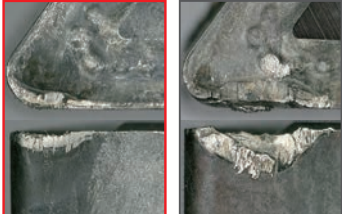
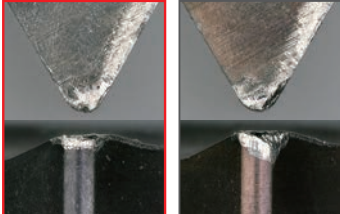
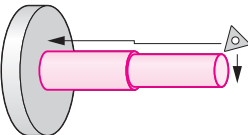
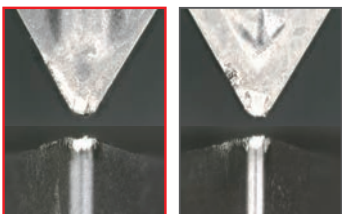
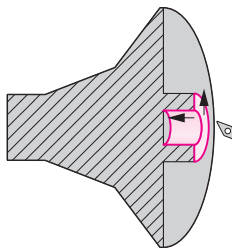
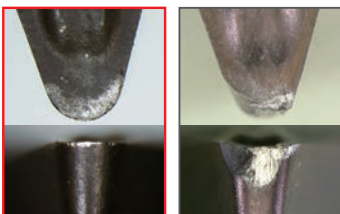
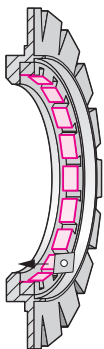
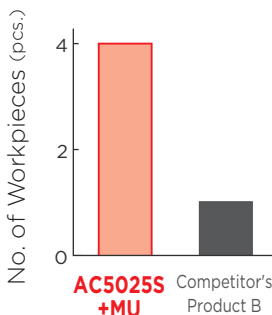
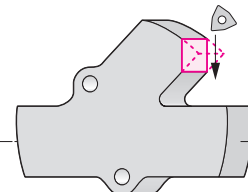
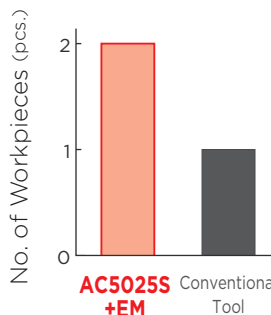
Ni-Based Heat-Resistant Alloy Automotive Component S Good wear resistance with 1.5x longer tool life   Tool: TNMG160408N-EX (AC5015S) Cutting Conditions: $vc = 82\text{m/min}$ $f = 0.12\text{mm/rev}$ $ap = 0.5\text{mm}$ Wet	Inconel Automotive Component S Suppresses wear and extends tool life   Tool: TNMG160408N-EF (AC5015S) Cutting Conditions: $vc = 30\text{m/min}$ $f = 0.04\text{mm/rev}$ $ap = 0.5\text{mm}$ Wet
Inconel 713C Automotive Component S Suppresses wear for 2x longer tool life   Tool: CNMG120408N-EX (AC5015S) Cutting Conditions: $vc = 100\text{m/min}$ $f = 0.12\text{mm/rev}$ $ap = 0.3\text{mm}$ Wet	Inconel 718 Aerospace Component S Good wear resistance for 2x longer tool life   Tool: SNMG120408N-EG (AC5015S) Cutting Conditions: $vc = 50\text{m/min}$ $f = 0.15\text{mm/rev}$ $ap = 2.0\text{mm}$ Wet
Inconel 625 Aerospace Component S Good wear resistance for 1.6x longer tool life   Tool: CNMG120408N-GU (AC5015S) Cutting Conditions: $vc = 50\text{m/min}$ $f = 0.3\text{mm/rev}$ $ap = 0.5\text{mm}$ Wet	Inconel 718 Aerospace Component S Good wear resistance for 2x longer tool life   Tool: CNMG120408N-EG (AC5015S) Cutting Conditions: $vc = 37\text{m/min}$ $f = 0.2\text{mm/rev}$ $ap = 1.4\text{mm}$ Wet

■ Application Examples of **AC5015S**

SUJ2 Automotive Component P Suppresses wear for 2x longer tool life   Tool: TNGG160402R-FY (AC5015S) Cutting Conditions: $vc = 120\text{m/min}$ $f = 0.1\text{mm/rev}$ $ap = 0.3\text{mm}$ Wet	Alloy Steel Industrial Machine Component P Stable machining with 1.6x longer tool life   Tool: CNMG120408N-EM (AC5015S) Cutting Conditions: $vc = 120\text{m/min}$ $f = 0.25\text{mm/rev}$ $ap = 0.30\text{mm}$ Wet
SCS13A Stainless Cast Steel Valve Component M Suppresses wear for 2.2x longer tool life   Tool: CNMG120408N-EM (AC5015S) Cutting Conditions: $vc = 90\text{m/min}$ $f = 0.15\text{mm/rev}$ $ap = 2.00\text{mm}$ Wet	FCD450 Automotive Component K Suppresses wear for 2x longer tool life   Tool: CPGT090308N-SD (AC5015S) Cutting Conditions: $vc = 210\text{m/min}$ $f = 0.19\text{mm/rev}$ $ap = 0.25\text{mm}$ Wet
Hardened Steel Automotive Component (47HRC) H Suppresses wear for 2x longer tool life   Tool: DCGT070202MN-SI (AC5015S) Cutting Conditions: $vc = 70\text{m/min}$ $f = 0.03\text{mm/rev}$ $ap = 0.80\text{mm}$ Wet	Sintered Ferrous Alloy Automotive Component Sintered Alloy Suppresses notch wear for 1.7x longer tool life   Tool: CNMG120408N-GU (AC5015S) Cutting Conditions: $vc = 170\text{m/min}$ $f = 0.15\text{mm/rev}$ $ap = 0.30\text{mm}$ Wet

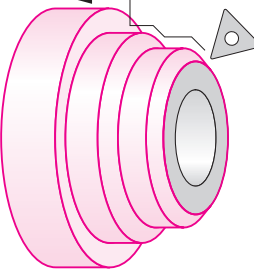
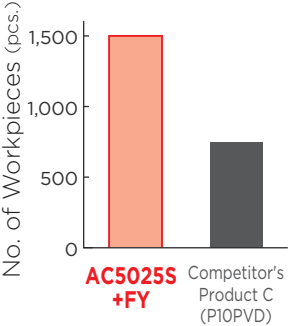
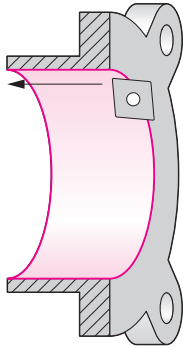
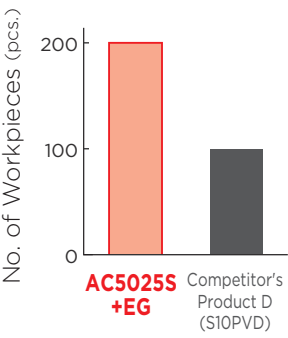
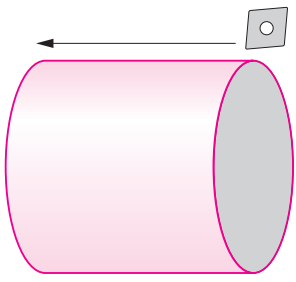
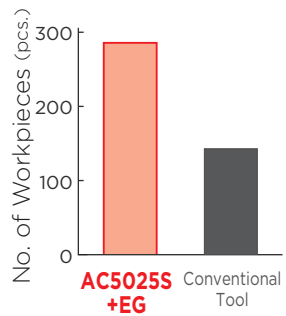
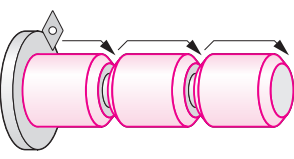
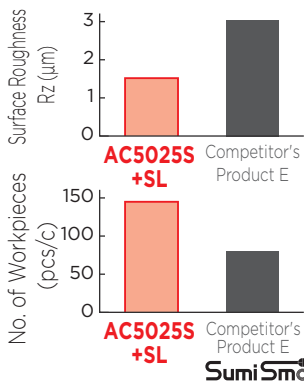
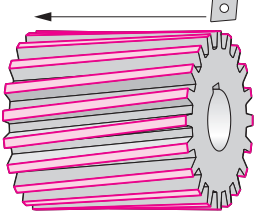
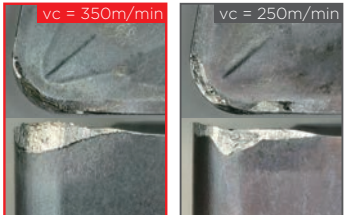
AC5005S/AC5015S/AC5025S

■ Application Examples of AC5025S

Inconel 718 Aerospace Component S Suppresses fractures for 1.7x longer tool life   AC5025S+EG (2.5 pcs/C) Conventional Tool (1.5 pcs/C) Tool: DNMG150408N-EG (AC5025S) Cutting Conditions: $vc = 35\text{m/min}$ $f = 0.1\text{mm/rev}$ $ap = 1.6\text{mm}$ Wet	Inconel 718 Aerospace Component S Suppresses wear for 1.5x longer tool life   AC5025S+FY (18 pcs/C) Conventional Tool (12 pcs/C) Tool: TNGG160402R-FY (AC5025S) Cutting Conditions: $vc = 37\text{m/min}$ $f = 0.1\text{mm/rev}$ $ap = 0.1\text{mm}$ Wet
Ni-Based Heat-Resistant Alloy Automotive Component S Enables stable machining with 2x longer tool life   AC5025S+SU (200 pcs/C) Competitor's Product A (S10 PVD) (100 pcs/C) Tool: TNGG160402N-SU (AC5025S) Cutting Conditions: $vc = 70\text{m/min}$ $f = 0.1\text{mm/rev}$ $ap = 0.15\text{mm}$ Wet	Inconel Automotive Component S Suppresses wear and extends tool life   AC5025S+SU (200 pcs/C) Conventional Tool (200 pcs/C) SumiSmall Tool: VCMT080204N-SU (AC5025S) Cutting Conditions: $vc = 49\text{m/min}$ $f = 0.15\text{mm/rev}$ $ap = 0.5\text{mm}$ Wet
Hastelloy Aerospace Component S Suppresses wear for 4x longer tool life   No. of Workpieces (pcs.) AC5025S+MU Competitor's Product B (S10PVD) Tool: CNMG120412N-MU (AC5025S) Cutting Conditions: $vc = 100\text{m/min}$ $f = 0.3\text{mm/rev}$ $ap = 3.0\text{mm}$ Wet	Fe-Based Heat-Resistant Alloy Valve Component S Enables stable machining with 2x longer tool life   No. of Workpieces (pcs.) AC5025S+EM Conventional Tool Tool: WNMG080408N-EM (AC5025S) Cutting Conditions: $vc = 90\text{m/min}$ $f = 0.15\text{mm/rev}$ $ap = 1.5\text{mm}$ Wet

AC5005S/AC5015S/AC5025S

Application Examples of AC5025S

SUJ2 Industrial Machine Component P Good wear resistance with 2x longer tool life   Tool: TNGG160402R-FY (AC5025S) Cutting Conditions: $vc = 110\text{m/min}$ $f = 0.1\text{mm/rev}$ $ap = 1.5\text{mm}$ Wet	S45C Sleeve Component End Face Lifting P Excellent, stable machined surface quality  SumiSmall Tool: DCGT11T302MN-SL (AC5025S) Cutting Conditions: $vc = 90\text{m/min}$ $f = 0.05\text{mm/rev}$ $ap = 0.10\text{mm}$ Wet (oil-based)
Heat Resistant Stainless Steel Automotive Component M Stable machining with 2x longer tool life   Tool: CNMG120408N-EG (AC5025S) Cutting Conditions: $vc = 80\text{m/min}$ $f = 0.3\text{mm/rev}$ $ap = 2.0\text{mm}$ Wet	SUS316 Industrial Machine Component M Suppresses wear for 1.5x longer tool life   Tool: CNMG120408N-EG (AC5025S) Cutting Conditions: $vc = 120\text{m/min}$ $f = 0.3\text{mm/rev}$ $ap = 1.5\text{mm}$ Wet
SUS431 Valve Part External Turning M Excellent cutting edge suppresses wear for 1.8x longer tool life. Machined surface roughness suppressed to 50% or below   SumiSmall Tool: DCGT070202MN-SL (AC5025S) Cutting Conditions: $vc = 270\text{m/min}$ $f = 0.04\text{mm/rev}$ $ap = 0.25\text{mm}$ Wet (oil-based)	Hardened Steel Industrial Machine Component (49HRC) H Same tool life achieved even at 1.4x higher cutting speed   AC5025S+MU (After cutting for 65 minutes) Conventional Tool (After cutting for 60 minutes) Tool: CNMG120412N-MU (AC5025S) Cutting Conditions: $vc = 350\text{m/min}$ $f = 0.16\text{mm/rev}$ $ap = 1.50\text{mm}$ Dry

AC5005S/AC5015S/AC5025S**80° Diamond type Negative Inserts**

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 FL	CNMG 120404N-FL	●	●	●	12.7	4.76	5.16	0.4
	120408N-FL	●	●	●				0.8
 SU	CNMG 120402N-SU	●	●	●	12.7	4.76	5.16	0.2
	120404N-SU	●	●	●				0.4
	120408N-SU	●	●	●				0.8
	120412N-SU	●	●	●				1.2
 SU	CNMG 120402N-SU	●	●	●	12.7	4.76	5.16	0.2
	120404N-SU	●	●	●				0.4
	120408N-SU	●	●	●				0.8
 EF	CNMG 090404N-EF	●	●	●	9.525	4.76	3.81	0.4
	090408N-EF	●	●	●				0.8
	120404N-EF	●	●	●	12.7	4.76	5.16	0.4
 EF	CNMG 120408N-EF	●	●	●				0.8
	120412N-EF	●	●	●				1.2
	CNMG 120402N-EF	●	●	●	12.7	4.76	5.16	0.2
 EF	120404N-EF	●	●	●				0.4
	120408N-EF	●	●	●				0.8
 EX	CNMG 120404N-EX	●	●	●	12.7	4.76	5.16	0.4
	120408N-EX	●	●	●				0.8
	120412N-EX	●	●	●				1.2
 EX	CNMG 160612N-EX	●	●	●	15.875	6.35	6.35	1.2
	CNMG 190612N-EX	●	●	●	19.05	6.35	7.94	1.2
 UP	CNMG 120404N-UP	●	●	●	12.7	4.76	5.16	0.4
	120408N-UP	●	●	●				0.8
	120412N-UP	●	●	●				1.2
 GU	CNMG 120404N-GU	●	●	●	12.7	4.76	5.16	0.4
	120408N-GU	●	●	●				0.8
	120412N-GU	●	●	●				1.2
 EG	CNMG 090408N-EG	●	●	●	9.525	4.76	3.81	0.8
	090412N-EG	●	●	●				1.2
	CNMG 120404N-EG	●	●	●		12.7	4.76	0.4
	120408N-EG	●	●	●				0.8
	120412N-EG	●	●	●				1.2
	CNMG 160608N-EG	●	●	●	15.875	6.35	6.35	0.8
	160612N-EG	●	●	●				1.2
	160616N-EG	●	●	●				1.6
	CNMG 190612N-EG	●	●	●	19.05	6.35	7.94	1.2
 MU	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
	CNMG 190612N-MU	●	●	●	19.05	6.35	7.94	1.2
	190616N-MU	●	●	●				1.6
	190624N-MU	●	●	●				2.4
 EM	CNMG 250924N-MU	●	●	●	25.4	9.52	9.12	2.4
	CNMG 120408N-EM	●	●	●	12.7	4.76	5.16	0.8
	120412N-EM	●	●	●				1.2
 EM	120416N-EM	●	●	●				1.6
	CNMG 160608N-EM	●	●	●	15.875	6.35	6.35	0.8
	160612N-EM	●	●	●				1.2
 EM	160616N-EM	●	●	●				1.6
	CNMG 190612N-EM	●	●	●	19.05	6.35	7.94	1.2
	190616N-EM	●	●	●				1.6
 EM	190624N-EM	●	●	●				2.4
	CNMG 250924N-EM	●	●	●	25.4	9.52	9.12	2.4
 UZ	CNMG 120408N-UZ	●	●	●	12.7	4.76	5.16	0.8
	120412N-UZ	●	●	●				1.2
 MP	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
 MP	190624N-MP	●	●	●				2.4
	CNMA 120408	●	●	●	12.7	4.76	5.16	0.8

55° Diamond type Negative Inserts

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 SU	DNMG 150402N-SU	●	●	●	12.7	4.76	5.16	0.2
	150404N-SU	●	●	●				0.4
 SU	150408N-SU	●	●	●	12.7	4.76	5.16	0.8
	DNMG 150402N-SU	●	●	●				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
 EF	DNMG 150404N-EF	●	●	●	12.7	4.76	5.16	0.4
	150408N-EF	●	●	●				0.8
 EX	DNMG 150404N-EX	●	●	●	12.7	4.76	5.16	0.4
	150408N-EX	●	●	●				0.8
	150412N-EX	●	●	●				1.2
 UP	DNMG 150404N-UP	●	●	●	12.7	4.76	5.16	0.4
	150408N-UP	●	●	●				0.8
	150412N-UP	●	●	●				1.2
 GU	DNMG 150404N-GU	●	●	●	12.7	4.76	5.16	0.4
	150408N-GU	●	●	●				0.8
	150412N-GU	●	●	●				1.2
 EG	DNMG 110408N-EG	●	●	●	9.525	4.76	3.81	0.8
	110412N-EG	●	●	●				1.2
	DNMG 150404N-EG	●	●	●		12.7	4.76	0.4
	150408N-EG	●	●	●				0.8
	150412N-EG	●	●	●				1.2
	DNMG 150604N-EG	●	●	●	12.7	6.35	5.16	0.4
	150608N-EG	●	●	●				0.8
	150612N-EG	●	●	●				1.2
 MU	DNMG 150408N-MU	●	●	●	12.7	4.76	5.16	0.8
	150412N-MU	●	●	●				1.2
	150416N-MU	●	●	●				1.6
 EM	DNMG 150408N-EM	●	●	●	12.7	4.76	5.16	0.8
	150412N-EM	●	●	●				1.2
	150416N-EM	●	●	●				1.6
 UZ	DNMG 150608N-EM	●	●	●	12.7	6.35	5.16	0.8
	150612N-EM	●	●	●				1.2
	DNMG 150408N-UZ	●	●	●	12.7	4.76	5.16	0.8
	150412N-UZ	●	●	●				1.2
 DNGA	150404	●	●	●	12.7	4.76	5.16	0.4

AC5005S/AC5015S/AC5025S

○ Square type Negative Inserts

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 SU	SNMG 120408N-SU	●	●	●	12.7	4.76	5.16	0.8
 EF	SNMG 120404N-EF	●	●	●	12.7	4.76	5.16	0.4
	120408N-EF	●	●	●	12.7	4.76	5.16	0.8
 EX	SNMG 120404N-EX	●	●	●				0.4
	120408N-EX	●	●	●	12.7	4.76	5.16	0.8
	120412N-EX	●	●	●				1.2
	SNMG 150612N-EX	●	●	●	15.875	6.35	6.35	1.2
	SNMG 190612N-EX	●	●	●	19.05	6.35	7.94	1.2
 UP	SNMG 120408N-UP	●	●	●	12.7	4.76	5.16	0.8
	120412N-UP	●	●	●				1.2
 GU	SNMG 120404N-GU	●	●	●				0.4
	120408N-GU	●	●	●	12.7	4.76	5.16	0.8
	120412N-GU	●	●	●				1.2
 EG	SNMG 120404N-EG	●	●	●				0.4
	120408N-EG	●	●	●	12.7	4.76	5.16	0.8
	120412N-EG	●	●	●				1.2
	SNMG 150608N-EG	●	●	●				0.8
	150612N-EG	●	●	●	15.875	6.35	6.35	1.2
	150616N-EG	●	●	●				1.6
	SNMG 190612N-EG	●	●	●				1.2
	190616N-EG	●	●	●	19.05	6.35	7.94	1.6
 UM	SNMG 120408N-UM	●	●	●	12.7	4.76	5.16	0.8
	120408L-UM	●	●	●				0.8
 MU	SNMG 120408N-MU	●	●	●	12.7	4.76	5.16	0.8
	120412N-MU	●	●	●				1.2
	SNMG 150608N-MU	●	●	●				0.8
	150612N-MU	●	●	●	15.875	6.35	6.35	1.2
	150616N-MU	●	●	●				1.6
	SNMG 190612N-MU	●	●	●				1.2
	190616N-MU	●	●	●	19.05	6.35	7.94	1.6
	190624N-MU	●	●	●				2.4
 EM	SNMG 250924N-MU	●	●	●	25.4	9.52	9.12	2.4
	SNMG 120408N-EM	●	●	●	12.7	4.76	5.16	0.8
	120412N-EM	●	●	●				1.2
	SNMG 150608N-EM	●	●	●				0.8
	150612N-EM	●	●	●	15.875	6.35	6.35	1.2
	150616N-EM	●	●	●				1.6
	SNMG 190612N-EM	●	●	●				1.2
	190616N-EM	●	●	●	19.05	6.35	7.94	1.6
 UZ	SNMG 190624N-EM	●	●	●				2.4
	SNMG 250924N-EM	●	●	●	25.4	9.52	9.12	2.4
	SNMG 120408N-UZ	●	●	●	12.7	4.76	5.16	0.8
 MP	120412N-UZ	●	●	●				1.2
	SNMM 120408N-MP	●	●	●				0.8
	120412N-MP	●	●	●	12.7	4.76	5.16	1.2
	120416N-MP	●	●	●				1.6
	SNMM 190612N-MP	●	●	●				1.2
	190616N-MP	●	●	●	19.05	6.35	7.94	1.6

△ Triangular type Negative Inserts

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 SU	TNMG 160402N-SU	●	●	●				0.2
	160404N-SU	●	●	●				0.4
	160408N-SU	●	●	●	9.525	4.76	3.81	0.8
	160412N-SU	●	●	●				1.2
 SU	TNGG 160402N-SU	●	●	●				0.2
	160404N-SU	●	●	●	9.525	4.76	3.81	0.4
	160408N-SU	●	●	●				0.8
 EF	TNMG 160404N-EF	●	●	●	9.525	4.76	3.81	0.4
	160408N-EF	●	●	●				0.8
 FY	TNGG 160402R-FY	●	●	●				0.2
	160402L-FY	●	●	●				0.2
	160404R-FY	●	●	●	9.525	4.76	3.81	0.4
	160404L-FY	●	●	●				0.4
 FX	TNGG 160402R-FX	●	●	●				0.2
	160402L-FX	●	●	●	9.525	4.76	3.81	0.2
	160404R-FX	●	●	●				0.4
	160404L-FX	●	●	●				0.4
 EX	TNMG 160404N-EX	●	●	●	9.525	4.76	3.81	0.4
	160408N-EX	●	●	●				0.8
	160412N-EX	●	●	●				1.2
 UP	TNMG 160404N-UP	●	●	●	9.525	4.76	3.81	0.4
	160408N-UP	●	●	●				0.8
	160412N-UP	●	●	●				1.2
 GU	TNMG 220408N-UP	●	●	●	12.7	4.76	5.16	0.8
	TNMG 160404N-GU	●	●	●	9.525	4.76	3.81	0.4
	160408N-GU	●	●	●				0.8
 EG	160412N-GU	●	●	●				1.2
	TNMG 160404N-EG	●	●	●	9.525	4.76	3.81	0.4
	160408N-EG	●	●	●				0.8
 MU	160412N-EG	●	●	●				1.2
	TNMG 160408N-MU	●	●	●	9.525	4.76	3.81	0.8
	160412N-MU	●	●	●				1.2
 EM	TNMG 220408N-MU	●	●	●	12.7	4.76	5.16	0.8
	TNMG 160408N-EM	●	●	●	9.525	4.76	3.81	0.8
	160412N-EM	●	●	●				1.2
 HM	TNMG 330924N-EM	●	●	●	19.05	9.52	7.93	2.4
	TNMG 160404R-HM	●	●	●				0.4
	160404L-HM	●	●	●	9.525	4.76	3.81	0.4
	160408R-HM	●	●	●				0.8
 TNMA	160408L-HM	●	●	●				0.8
	TNMA 160404	●	●	●	9.525	4.76	3.81	0.4
	160408	●	●	●				0.8
 TNGA	160404	●	●	●	9.525	4.76	3.81	0.4

● mark: Standard stocked item Blank: Made-to-order item

AC5005S/AC5015S/AC5025S

35° Diamond type Negative Inserts

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 SU	VNMG 160402N-SU	●	●	●	9.525	4.76	3.81	0.2
	160404N-SU	●	●	●				0.4
	160408N-SU	●	●	●				0.8
 EF	VNMG 160402N-EF	●	●	●	9.525	4.76	3.81	0.2
	160404N-EF	●	●	●				0.4
	160408N-EF	●	●	●				0.8
 EX	VNMG 160402N-EX	●	●	●	9.525	4.76	3.81	0.2
	160404N-EX	●	●	●				0.4
	160408N-EX	●	●	●				0.8
 GU	VNMG 160404N-GU	●	●	●	9.525	4.76	3.81	0.4
	160408N-GU	●	●	●				0.8
	160412N-GU	●	●	●				1.2
 EG	VNMG 160404N-EG	●	●	●	9.525	4.76	3.81	0.4
	160408N-EG	●	●	●				0.8
	160412N-EG	●	●	●				1.2
 UZ	VNMG 160404N-UZ	●	●	●	9.525	4.76	3.81	0.4
	160408N-UZ	●	●	●				0.8

Trigon type Negative Inserts

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 SU	WNMG 080404N-SU	●	●	●	12.7	4.76	5.16	0.4
	080408N-SU	●	●	●				0.8
	080412N-SU	●	●	●				1.2
 EF	WNMG 060404N-EF	●	●	●	9.525	4.76	3.81	0.4
	060408N-EF	●	●	●				0.8
	080404N-EF	●	●	●				0.4
 EX	WNMG 080404N-EX	●	●	●	12.7	4.76	5.16	0.4
	080408N-EX	●	●	●				0.8
	080412N-EX	●	●	●				1.2
 UP	WNMG 080408N-UP	●	●	●	12.7	4.76	5.16	0.8
	080412N-UP	●	●	●				1.2
 GU	WNMG 080404N-GU	●	●	●	12.7	4.76	5.16	0.4
	080408N-GU	●	●	●				0.8
	080412N-GU	●	●	●				1.2
 EG	WNMG 060408N-EG	●	●	●	9.525	4.76	3.81	0.8
	060412N-EG	●	●	●				1.2
	080404N-EG	●	●	●	12.7	4.76	5.16	0.4
 MU	WNMG 080408N-MU	●	●	●				0.8
	080412N-MU	●	●	●				1.2
 EM	WNMG 080408N-EM	●	●	●	12.7	4.76	5.16	0.8
	080412N-EM	●	●	●				1.2
 UZ	WNMG 080404N-UZ	●	●	●	12.7	4.76	5.16	0.4
	080408N-UZ	●	●	●				0.8
	080412N-UZ	●	●	●				1.2

Square type Negative Inserts (Without Hole)

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
 SNMN	120408	●	●	●	12.7	4.76	-	0.8
	120412	●	●	●				1.2
	120416	●	●	●				1.6

80° Diamond type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)					
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius		
 FF	7°	CCGT 060201MN-FF	●	●	●	6.35	2.38	2.8	< 0.1		
		060202MN-FF	●	●	●				< 0.2		
		060204MN-FF	●	●	●				< 0.4		
 FF	7°	CCGT 09T301MN-FF	●	●	●	9.525	3.97	4.4	< 0.1		
		09T302MN-FF	●	●	●				< 0.2		
		09T304MN-FF	●	●	●				< 0.4		
 FX	7°	CCGT 0602003R-FX	●	●	●	6.35	2.38	2.8	0.03		
		0602003L-FX	●	●	●				0.03		
		060201R-FX	●	●	●				0.1		
		060201L-FX	●	●	●				0.1		
		060202R-FX	●	●	●				0.2		
		060202L-FX	●	●	●				0.2		
		060204R-FX	●	●	●				0.4		
		060204L-FX	●	●	●				0.4		
	7°	CCGT 09T3003R-FX	●	●	●	9.525	3.97	4.4	0.03		
		09T3003L-FX	●	●	●				0.03		
		09T301R-FX	●	●	●				0.1		
		09T301L-FX	●	●	●				0.1		
		09T302R-FX	●	●	●				0.2		
		09T302L-FX	●	●	●				0.2		
		09T304R-FX	●	●	●				0.4		
		09T304L-FX	●	●	●				0.4		
	7°	CCGT 09T308R-FX	●	●	●				0.8		
		09T308L-FX	●	●	●				0.8		
CCGT 03X1003R-FYS		●	●	●	3.5				1.4	1.8	0.03
03X1003L-FYS		●	●	●							0.03
03X101R-FYS		●	●	●							0.1
03X101L-FYS		●	●	●							0.1
03X102R-FYS		●	●	●							0.2
03X102L-FYS		●	●	●							0.2
03X104R-FYS	●	●	●	0.4							
03X104L-FYS	●	●	●	0.4							
7°	CCGT 04X1003R-FYS	●	●	●	4.3	1.8	2.3	0.03			
	04X1003L-FYS	●	●	●				0.03			
	04X101R-FYS	●	●	●				0.1			
	04X101L-FYS	●	●	●				0.1			
	04X102R-FYS	●	●	●				0.2			
	04X102L-FYS	●	●	●				0.2			
	04X104R-FYS	●	●	●				0.4			
	04X104L-FYS	●	●	●				0.4			
 FY	7°	CCGT 03X101R-FY	●	●	●	3.5	1.4	1.8	0.1		
		03X101L-FY	●	●	●				0.1		
		03X102R-FY	●	●	●				0.2		
		03X102L-FY	●	●	●				0.2		
		03X104R-FY	●	●	●				0.4		
	7°	CCGT 03X104L-FY	●	●	●	0.4					
		CCGT 04X101R-FY	●	●	●	4.3	1.8	2.3	0.1		
		04X101L-FY	●	●	●				0.1		
		04X102R-FY	●	●	●				0.2		
		04X102L-FY	●	●	●				0.2		
04X104R-FY	●	●	●	0.4							
04X104L-FY	●	●	●	0.4							
 SU	7°	CCMT 060202N-SU	●	●	●	6.35	2.38	2.8	0.2		
		060204N-SU	●	●	●				0.4		
		060208N-SU	●	●	●				0.8		
	7°	CCMT 09T302N-SU	●	●	●	9.525	3.97	4.4	0.2		
		09T304N-SU	●	●	●				0.4		
		09T308N-SU	●	●	●				0.8		
	7°	CCMT 120404N-SU	●	●	●	12.7	4.76	5.5	0.4		
		120408N-SU	●	●	●				0.8		
 SI	7°	CCGT 060201MN-SI	●	●	●	6.35	2.38	2.8	< 0.1		
		060202MN-SI	●	●	●				< 0.2		
		060204MN-SI	●	●	●				< 0.4		
	7°	CCGT 09T301MN-SI	●	●	●	9.525	3.97	4.4	< 0.1		
		09T302MN-SI	●	●	●				< 0.2		
		09T304MN-SI	●	●	●				< 0.4		
 SL	7°	CCGT 060201MN-SL	●	●	●	6.35	2.38	2.8	< 0.1		
		060202MN-SL	●	●	●				< 0.2		
	7°	CCGT 09T301MN-SL	●	●	●	9.525	3.97	4.4	< 0.1		
		09T302MN-SL	●	●	●				< 0.2		
	7°	CCGT 09T304MN-SL	●	●	●				< 0.4		
 GU	7°	CCMT 060204N-GU	●	●	●	6.35	2.38	2.8	0.4		
		060208N-GU	●	●	●				0.8		

AC5005S/AC5015S/AC5025S**80° Diamond type Positive Inserts (Continued)**

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	11°	CPGT 080202N-SD	●	●					0.2
		080204N-SD	●	●		7.94	2.38	3.4	0.4
		080208N-SD	●	●					0.8
	11°	CPGT 090302N-SD	●	●					0.2
		090304N-SD	●	●		9.525	3.18	4.4	0.4
		090308N-SD	●	●					0.8
	11°	CPGT 120402N-SD	●	●					0.2
		120404N-SD	●	●		12.7	4.76	5.5	0.4
		120408N-SD	●	●					0.8
	11°	CPMT 080204N-SU	●	●		7.94	2.38	3.4	0.4
		080208N-SU	●	●					0.8
		CPMT 090304N-SU	●	●		9.525	3.18	4.4	0.4
	11°	090308N-SU	●	●					0.8

55° Diamond type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	7°	DCGT 070201MN-FF	●	●					< 0.1
		070202MN-FF	●	●		6.35	2.38	2.8	< 0.2
		070204MN-FF	●	●					< 0.4
	7°	DCGT 11T301MN-FF	●	●					< 0.1
		11T302MN-FF	●	●		9.525	3.97	4.4	< 0.2
		11T304MN-FF	●	●					< 0.4
	7°	DCGT 070201MN-FC	●	●					< 0.1
		070202MN-FC	●	●		6.35	2.38	2.8	< 0.2
		070204MN-FC	●	●					< 0.4
	7°	DCGT 11T301MN-FC	●	●					< 0.1
		11T302MN-FC	●	●		9.525	3.97	4.4	< 0.2
		11T304MN-FC	●	●					< 0.4
	7°	DCGT 0702003R-FX	●	●					0.03
		0702003L-FX	●	●					0.03
		070201R-FX	●	●		6.35	2.38	2.8	0.1
		070201L-FX	●	●					0.1
		070202R-FX	●	●					0.2
		070202L-FX	●	●					0.2
	7°	DCGT 11T3003R-FX	●	●					0.03
		11T3003L-FX	●	●					0.03
		11T301R-FX	●	●		9.525	3.97	4.4	0.1
		11T301L-FX	●	●					0.1
		11T302R-FX	●	●					0.2
		11T302L-FX	●	●					0.2
	7°	DCGT 0702003R-FYS	●	●					0.03
		0702003L-FYS	●	●					0.03
		070201R-FYS	●	●		6.35	2.38	2.8	0.1
		070201L-FYS	●	●					0.1
		070202R-FYS	●	●					0.2
		070202L-FYS	●	●					0.2
	7°	DCGT 11T3003R-FYS	●	●					0.03
		11T3003L-FYS	●	●					0.03
		11T301R-FYS	●	●		9.525	3.97	4.4	0.1
		11T301L-FYS	●	●					0.1
		11T302R-FYS	●	●					0.2
		11T302L-FYS	●	●					0.2
	7°	DCGT 0702003R-FY	●	●					0.03
		0702003L-FY	●	●					0.03
		070201R-FY	●	●		6.35	2.38	2.8	0.1
		070201L-FY	●	●					0.1
		070202R-FY	●	●					0.2
		070202L-FY	●	●					0.2
	7°	DCGT 11T3003R-FY	●	●					0.03
		11T3003L-FY	●	●					0.03
		11T301R-FY	●	●		9.525	3.97	4.4	0.1
		11T301L-FY	●	●					0.1
		11T302R-FY	●	●					0.2
		11T302L-FY	●	●					0.2
	7°	DCMT 070202N-SU	●	●					0.2
		070204N-SU	●	●		6.35	2.38	2.8	0.4
		070208N-SU	●	●					0.8
	7°	DCMT 11T302N-SU	●	●					0.2
		11T304N-SU	●	●		9.525	3.97	4.4	0.4
		11T308N-SU	●	●					0.8
	7°	DCGT 070201MN-SI	●	●					< 0.1
		070202MN-SI	●	●		6.35	2.38	2.8	< 0.2
		070204MN-SI	●	●					< 0.4
	7°	DCGT 11T301MN-SI	●	●					< 0.1
		11T302MN-SI	●	●		9.525	3.97	4.4	< 0.2
		11T304MN-SI	●	●					< 0.4
	7°	DCGT 070201MN-SL	●	●					< 0.1
		070202MN-SL	●	●		6.35	2.38	2.8	< 0.2
		070204MN-SL	●	●					< 0.4
	7°	DCGT 11T301MN-SL	●	●					< 0.1
		11T302MN-SL	●	●		9.525	3.97	4.4	< 0.2
		11T304MN-SL	●	●					< 0.4

A "<" next to the corner radius indicates negative tolerance.

● mark: Standard stocked item Blank: Made-to-order item

AC5005S/AC5015S/AC5025S

○ Round type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	7°	RCMX 1204M0N-RP	●	●	●	12.0	4.76	4.2	-
		RCMX 2006M0N-RP	●	●	●	20.0	6.35	6.5	-
	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	-

□ Square type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	7°	SCGT 09T302R-FX	●	●	●	9.525	3.97	4.4	0.2
		09T302L-FX	●	●	●				0.2
		09T304R-FX	●	●	●				0.4
		09T304L-FX	●	●	●				0.4
	7°	SCGT 120404R-FX	●	●	●	12.7	4.76	5.5	0.4
		120404L-FX	●	●	●				0.4
	7°	SCMT 09T304N-SU	●	●	●	9.525	3.97	4.4	0.4
		09T308N-SU	●	●	●				0.8

△ Triangular type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	5°	TBGT 060102R-FX	●	●	●	3.97	1.59	2.2	0.2
		060102L-FX	●	●	●				0.2
		060104R-FX	●	●	●				0.4
		060104L-FX	●	●	●				0.4
	5°	TBGT 060101R-FY	●	●	●	3.97	1.59	2.2	0.1
		060101L-FY	●	●	●				0.1
		060102R-FY	●	●	●				0.2
		060102L-FY	●	●	●				0.2
		060104R-FY	●	●	●				0.4
		060104L-FY	●	●	●				0.4
	7°	TCGT 110201MN-FF	●	●	●	6.35	2.38	2.8	< 0.1
		110202MN-FF	●	●	●				< 0.2
		110204MN-FF	●	●	●				< 0.4
		TCGT 090201R-FX	●	●	●	5.56	2.38	2.5	0.1
	7°	090201L-FX	●	●	●				0.1
		090202R-FX	●	●	●				0.2
		090202L-FX	●	●	●				0.2
		TCGT 110201R-FX	●	●	●	6.35	2.38	2.8	0.1
	7°	110201L-FX	●	●	●				0.1
		110202R-FX	●	●	●				0.2
		110202L-FX	●	●	●				0.2
	7°	TCGT 090201R-FY	●	●	●	5.56	2.38	2.5	0.1
		090201L-FY	●	●	●				0.1
		090202R-FY	●	●	●				0.2
		090202L-FY	●	●	●				0.2
	7°	TCGT 110201R-FY	●	●	●	6.35	2.38	2.8	0.1
		110201L-FY	●	●	●				0.1
		110202R-FY	●	●	●				0.2
		110202L-FY	●	●	●				0.2
	7°	TCMT 110204N-SU	●	●	●	6.35	2.38	2.8	0.4
		110208N-SU	●	●	●				0.8
	7°	TCMT 16T304N-SU	●	●	●	9.525	3.97	4.3	0.4
		16T308N-SU	●	●	●				0.8
	7°	TCGT 110201MN-SI	●	●	●	6.35	2.38	2.8	< 0.1
		110202MN-SI	●	●	●				< 0.2
		110204MN-SI	●	●	●				< 0.4
	11°	TPGT 080201MN-FF	●	●	●	4.76	2.38	2.4	< 0.1
		080202MN-FF	●	●	●				< 0.2
		080204MN-FF	●	●	●				< 0.4
	11°	TPGT 110302MN-FC	●	●	●	6.35	3.18	3.4	< 0.2
		110304MN-FC	●	●	●				< 0.4

A "<" next to the corner radius indicates negative tolerance.

● mark: Standard stocked item Blank: Made-to-order item

△ Triangular type Positive Inserts (continued)

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)							
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius				
	11°	TPGT 080202R-FX		●	●	4.76	2.38	2.4	0.2				
		080202L-FX		●	●				0.2				
		080204R-FX		●	●				0.4				
		080204L-FX		●	●				0.4				
	11°	TPGT 110202R-FX		●	●	6.35	2.38	2.8	0.2				
		110202L-FX		●	●				0.2				
		110204R-FX		●	●				0.4				
		110204L-FX		●	●				0.4				
	11°	110208R-FX		●	●	6.35	3.18	3.4	0.8				
		110208L-FX		●	●				0.8				
		TPGT 110302R-FX		●	●				0.2				
		110302L-FX		●	●				0.2				
	11°	110304R-FX		●	●	6.35	3.18	3.4	0.4				
		110304L-FX		●	●				0.4				
		110308R-FX		●	●				0.8				
		110308L-FX		●	●				0.8				
11°	TPGT 160304R-FX		●	●	9.525	3.18	4.4	0.4					
	160304L-FX		●	●				0.4					
	160308R-FX		●	●				0.8					
	160308L-FX		●	●				0.8					
	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				
	11°	TPGT 090201R-FY		●	●	5.56	2.38	2.3	0.1				
		090201L-FY		●	●				0.1				
		090202R-FY		●	●				0.2				
		090202L-FY		●	●				0.2				
		090204R-FY		●	●				0.4				
		090204L-FY		●	●				0.4				
		11°	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							
	11°	110308R-FY		●	●	9.525	3.18	4.4	0.8				
		110308L-FY		●	●				0.8				
TPGT 160302R-FY			●	●	0.2								
160302L-FY			●	●	0.2								
160304R-FY			●	●	0.4								
160304L-FY			●	●	0.4								
160308R-FY			●	●	0.8								
160308L-FY			●	●	0.8								
	11°	TPGT 110304L-SD		●	●	6.35	3.18	3.4	0.4				
		160404L-SD		●	●	9.525	4.76	4.4	0.4				
	11°	TPMT 080202N-SU		●	●	4.76	2.38	2.4	0.2				
		080204N-SU		●	●				0.4				
	11°	TPMT 090204N-SU		●	●	5.56	2.38	2.8	0.4				
		TPMT 110302N-SU		●	●				6.35	3.18	3.4	0.2	
	110304N-SU		●	●	0.4								
	110308N-SU		●	●	0.8								
	11°	TPMT 160404N-SU		●	●	9.525	4.76	4.4	0.4				
		160408N-SU		●	●				0.8				
	11°	TPGT 080201MN-SI		●	●	4.76	2.38	2.4	< 0.1				
		080202MN-SI		●	●				< 0.2				
		080204MN-SI		●	●				< 0.4				
	11°	TPGW 110304		●	●	6.35	3.18	3.4	0.4				
		160404		●	●	9.525	4.76	4.4	0.4				

AC5005S/AC5015S/AC5025S

35° Diamond type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	5°	VBGT 110301R-FX	●	●	●	6.35	3.18	2.8	0.1
		110301L-FX	●	●	●				0.1
		110302R-FX	●	●	●				0.2
		110302L-FX	●	●	●				0.2
		110304R-FX	●	●	●				0.4
		110304L-FX	●	●	●				0.4
	5°	VBGT 1103003R-FYS	●	●	●	6.35	3.18	2.8	0.03
		1103003L-FYS	●	●	●				0.03
		110301R-FYS	●	●	●				0.1
		110301L-FYS	●	●	●				0.1
		110302R-FYS	●	●	●				0.2
		110302L-FYS	●	●	●				0.2
		110304R-FYS	●	●	●				0.4
		110304L-FYS	●	●	●				0.4
		110308R-FYS	●	●	●				0.8
		110308L-FYS	●	●	●				0.8
	5°	VBGT 110301R-FY	●	●	●	6.35	3.18	2.8	0.1
		110301L-FY	●	●	●				0.1
		110302R-FY	●	●	●				0.2
		110302L-FY	●	●	●				0.2
		110304R-FY	●	●	●				0.4
		110304L-FY	●	●	●				0.4
	5°	VBMT 110302N-SU	●	●	●	6.35	3.18	2.8	0.2
		110304N-SU	●	●	●				0.4
		110308N-SU	●	●	●				0.8
		VBMT 160404N-SU	●	●	●	9.525	4.76	4.4	0.4
	5°	160408N-SU	●	●	●				0.8
		VBGT 110301MN-SI	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SI	●	●	●				< 0.2
		110304MN-SI	●	●	●				< 0.4
		110308MN-SI	●	●	●				< 0.8
		VBGT 160401MN-SI	●	●	●	9.525	4.76	4.4	< 0.1
		160402MN-SI	●	●	●				< 0.2
		160404MN-SI	●	●	●				< 0.4
		160408MN-SI	●	●	●				< 0.8
		VCMT 110301MN-SI	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SI	●	●	●				< 0.2
		110304MN-SI	●	●	●				< 0.4
		110308MN-SI	●	●	●				< 0.8
	7°	VCMT 110301MN-SI	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SI	●	●	●				< 0.2
		110304MN-SI	●	●	●				< 0.4
	7°	VCMT 080204MN-FC	●	●	●	4.76	2.38	2.3	< 0.4
		VCMT 110301MN-FC	●	●	●				< 0.1
		110302MN-FC	●	●	●	6.35	3.18	2.8	< 0.2
	7°	110304MN-FC	●	●	●				< 0.4
		VCMT 110301R-FX	●	●	●	6.35	3.18	2.8	0.1
		110301L-FX	●	●	●				0.1
		110302R-FX	●	●	●				0.2
		110302L-FX	●	●	●				0.2
		110304R-FX	●	●	●				0.4
	7°	110304L-FX	●	●	●				0.4
		VCMT 110301R-FY	●	●	●	6.35	3.18	2.8	0.1
		110301L-FY	●	●	●				0.1
		110302R-FY	●	●	●				0.2
		110302L-FY	●	●	●				0.2
		110304R-FY	●	●	●				0.4
	7°	110304L-FY	●	●	●				0.4
		VCMT 080204N-SU	●	●	●	4.76	2.38	2.3	0.4
		VCMT 110302N-SU	●	●	●				0.2
		110304N-SU	●	●	●	6.35	3.18	2.8	0.4
		110308N-SU	●	●	●				0.8
		VCMT 160404N-SU	●	●	●	9.525	4.76	4.4	0.4
	7°	160408N-SU	●	●	●				0.8
		VCMT 110301MN-SI	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SI	●	●	●				< 0.2
		110304MN-SI	●	●	●				< 0.4
		110308MN-SI	●	●	●				< 0.8
		VCMT 160401MN-SI	●	●	●	9.525	4.76	4.4	< 0.1
	7°	160402MN-SI	●	●	●				< 0.2
		160404MN-SI	●	●	●				< 0.4
		160408MN-SI	●	●	●				< 0.8
		VCMT 110301MN-SL	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SL	●	●	●				< 0.2
		110304MN-SL	●	●	●				< 0.4
	7°	VCMT 160404N-GU	●	●	●	9.525	4.76	4.4	0.4
		160408N-GU	●	●	●				0.8
	11°	VPGT 110301MN-SI	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SI	●	●	●				< 0.2
	11°	VPGT 110301MN-SI	●	●	●	6.35	3.18	2.8	< 0.1
		110302MN-SI	●	●	●				< 0.2

Trigon type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	5°	WBG 060102R-FX	●	●	●	3.97	1.59	2.2	0.2
		060102L-FX	●	●	●				0.2
		060104R-FX	●	●	●				0.4
		060104L-FX	●	●	●				0.4
		WBG 080202R-FX	●	●	●				0.2
	5°	080202L-FX	●	●	●	4.76	2.38	2.4	0.2
		080204R-FX	●	●	●				0.4
		080204L-FX	●	●	●				0.4
		WBG 060102R-FY	●	●	●	3.97	1.59	2.2	0.2
		060102L-FY	●	●	●				0.2
		060104R-FY	●	●	●				0.4
		060104L-FY	●	●	●				0.4

Square type Positive Inserts (Without Hole)

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	11°	SPMN 120308	●	●	●	12.7	3.18	-	0.8
		120312	●	●	●				1.2
	11°	SPMN 150408	●	●	●	15.875	4.76	-	0.8
		SPGN 090308		●	●				0.8
	11°	SPGN 120304		●	●	12.7	3.18	-	0.4
		120308		●	●				0.8

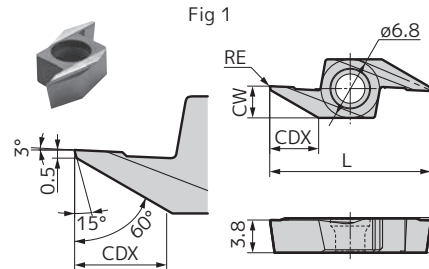
Triangular type Positive Inserts (Without Hole)

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC5005S	AC5015S	AC5025S	Inscribed Circle	Thickness	Bore Dia.	Corner Radius
	11°	TPMN 110304	●	●	●	6.35	3.18	-	0.4
		110308	●	●	●				0.8
	11°	TPMN 160304	●	●	●	9.525	3.18	-	0.4
		160308	●	●	●				0.8
	11°	TPMN 220408	●	●	●	12.7	4.76	-	0.8
	220412	●	●	●	1.2				
	11°	TPGN 110304	●	●	●	6.35	3.18	-	0.4
	11°	TPGN 160304	●	●	●	9.525	3.18	-	0.4
		160308	●	●	●				0.8
	11°	TPGN 220408	●	●	●	12.7	4.76	-	0.8

Inserts for SEC-MINI Tool Holders SBT series / PBT series (For Back Turning)**Insert (Back Turning)**

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	Overall Length L	Max. Machining Depth CDX	Width of Cut CW	Corner Ballnose Radius RE	Applicable Holder	Fig
BT R3505	●	●	15	3.5	2.5	0.05	SBT35R0000	1
BT R3508 <i>New</i>	●	●	15	3.5	2.5	0.08	PBT35R0000	1
BT R3515	●	●	15	3.5	2.5	0.15		1
BT R5505	●	●	19	5.5	3.7	0.05	PBT55R0000	1
BT R5508 <i>New</i>	●	●	19	5.5	3.7	0.08		1
BT R5515	●	●	19	5.5	3.7	0.15		1
BT R8005	●	●	24	8.0	5.2	0.05	PBT80R0000	1
BT R8008 <i>New</i>	●	●	24	8.0	5.2	0.08		1
BT R8015	●	●	24	8.0	5.2	0.15		1



Also usable with the SBT type Head for Indexable Head Type Quick Change Holder APM type.

Inserts for SEC-Grooving Tools GWC series (For Grooving)

Fig 1 (Grooving)

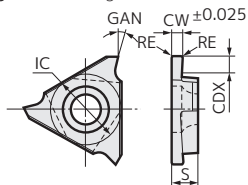


Figure shows right-handed (R) tool.

Rake Angle by Grade (Grooving)

Grade	Cutting Edge Shape	GAN
Coated Carbide AC5015S	Honing	15°
Coated Carbide AC5025S	Honing	15°

Insert (Grooving)

Dimensions (mm)

Cat. No.	AC5015S		AC5025S		Width of Cut CW	Max. Keyway Depth CDX	Corner Ballnose Radius RE	Inscribed Circle IC	Thickness S	*Group No.	Fig
	R	L	R	L							
TGA R/L3100	●	●	●	●	1.00	2.0	0.1	9.525	3.18	1	1
TGA R/L3110	●	●	●	●	1.10	2.0	0.1	9.525	3.18	1	1
TGA R/L3125	●	●	●	●	1.25	2.0	0.1	9.525	3.18	1	1
TGA R/L3150	●	●	●	●	1.50	2.0	0.1	9.525	3.18	1	1
TGA R/L3200	●	●	●	●	2.00	2.5	0.1	9.525	3.18	1	1
TGA R/L3300 <i>New</i>	●	●	●	●	3.00	2.5	0.1	9.525	3.18	1	1

*Select applicable inserts and holders by using matching group numbers.

Also usable with the GWC series Head for Indexable Head Type Quick Change Holder APM type.

Inserts for SEC-Grooving Tools GWC series (For Threading)

Fig 1 (Threading)

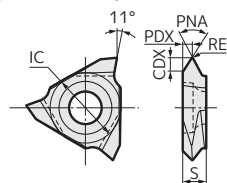


Figure shows right-handed (R) tool.

Insert (Threading, 60°/55° General-purpose Threads)

Dimensions (mm)

Cat. No.	AC5015S		AC5025S		Pitch	Corner Ballnose Radius RE	X Direction PDX	Process Depth CDX	Thread Ridge Angle PNA	Inscribed Circle IC	Thickness S	*Group No.	Fig
	R	L	R	L	mm	Threads/Inch							
TTE R/L36002075	●	●	●	●	0.20 to 0.75	80 to 32	0.05	0.55	0.65	60	9.525	3.18	1
TTE R/L36005125	●	●	●	●	0.50 to 1.25	56 to 20	0.05	1.00	1.30	60	9.525	3.18	1
TTE R/L3601015	●	●	●	●	1.00 to 1.50	24 to 16	0.10	1.30	1.80	60	9.525	3.18	1
TTE R/L3601530	●	●	●	●	1.50 to 3.00	16 to 8	0.20	1.70	2.40	60	9.525	3.18	1
TTE R/L3554816	●	●	●	●	—	48 to 16	0.05	1.00	1.50	55	9.525	3.18	1
TTE R/L3552008	●	●	●	●	—	20 to 8	0.10	1.50	2.40	55	9.525	3.18	1

*Select applicable inserts and holders by using matching group numbers.

Also usable with the GWC series Head for Indexable Head Type Quick Change Holder APM type.

Refer to the General Catalogue for details on the holders of the products indicated on this page.

● mark: Standard stocked item (new product/expanded item)

Inserts for SEC-Grooving Tools GND Series (For Grooving / Cut-off)

Fig 1

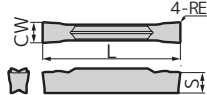


Fig 2 (Figure shows right-handed (R) tool.)

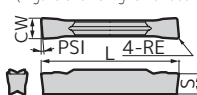
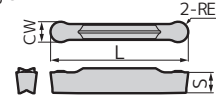


Fig 3

**Grooving / Traverse Cutting**

Dimensions (mm)

Cat. No.	AC5015S AC5025S	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
		Width of Cut	Tolerance					
GCM N3002-MG	●●	3.0	±0.03	0.2	21.1	3.8	1	1
N3004-MG	●●	3.0	±0.03	0.4	21.1	3.8		1
GCM N4002-MG	●●	4.0	±0.03	0.2	26.4	4.0	1	1
N4004-MG	●●	4.0	±0.03	0.4	26.4	4.0		1
GCM N5004-MG	●●	5.0	±0.03	0.4	26.4	4.1	5	1
N5008-MG	●●	5.0	±0.03	0.8	26.4	4.1		1
GCM N6004-MG	●●	6.0	±0.03	0.4	26.4	4.5	1	1
N6008-MG	●●	6.0	±0.03	0.8	26.4	4.5		1
GCM N7004-MG	●●	7.0	±0.04	0.4	28.8	5.5	1	1
N7008-MG	●●	7.0	±0.04	0.8	28.8	5.5		1
GCM N8004-MG	●●	8.0	±0.04	0.4	28.8	6.0	1	1
N8008-MG	●●	8.0	±0.04	0.8	28.8	6.0		1
GCM N2002-ML	●●	2.0	±0.03	0.2	21.1	3.6	1	1
N3002-ML	●●	3.0	±0.03	0.2	21.1	3.8		1
N3004-ML	●●	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-ML	●●	4.0	±0.03	0.2	26.4	4.0		1
N4004-ML	●●	4.0	±0.03	0.4	26.4	4.0	1	1
N4008-ML	●●	4.0	±0.03	0.8	26.4	4.0		1
GCM N5004-ML	●●	5.0	±0.03	0.4	26.4	4.1	5	1
N5008-ML	●●	5.0	±0.03	0.8	26.4	4.1		1
GCM N6004-ML	●●	6.0	±0.03	0.4	26.4	4.5	1	1
N6008-ML	●●	6.0	±0.03	0.8	26.4	4.5		1
GCM N7004-ML	●●	7.0	±0.04	0.4	28.8	5.5	1	1
N7008-ML	●●	7.0	±0.04	0.8	28.8	5.5		1
GCM N8004-ML	●●	8.0	±0.04	0.4	28.8	6.0	1	1
N8008-ML	●●	8.0	±0.04	0.8	28.8	6.0		1

Grooving / Cut-off

Dimensions (mm)

GCM N2002-GG	●●	2.0	±0.03	0.2	21.1	3.6	1	1
N3002-GG	●●	3.0	±0.03	0.2	21.1	3.8		1
GCM N3004-GG	●●	3.0	±0.03	0.4	21.1	3.8	1	1
N4002-GG	●●	4.0	±0.03	0.2	26.4	4.0		1
N4004-GG	●●	4.0	±0.03	0.4	26.4	4.0	5	1
GCM N5002-GG	●●	5.0	±0.03	0.2	26.4	4.1		1
N5004-GG	●●	5.0	±0.03	0.4	26.4	4.1	1	1
GCM N6002-GG	●●	6.0	±0.03	0.2	26.4	4.5		1
N6004-GG	●●	6.0	±0.03	0.4	26.4	4.5	1	1
GCM N7004-GG	●●	7.0	±0.04	0.4	28.8	5.5		1
GCM N8004-GG	●●	8.0	±0.04	0.4	28.8	6.0	1	1
N2002-GL	●●	2.0	±0.03	0.2	21.1	3.6		1
N2004-GL	●●	2.0	±0.03	0.4	21.1	3.6	1	1
GCM N3002-GL	●●	3.0	±0.03	0.2	21.1	3.8		1
N3004-GL	●●	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-GL	●●	4.0	±0.03	0.2	26.4	4.0		1
N4004-GL	●●	4.0	±0.03	0.4	26.4	4.0	5	1
GCM N5002-GL	●●	5.0	±0.03	0.2	26.4	4.1		1
N5004-GL	●●	5.0	±0.03	0.4	26.4	4.1	1	1
GCM N6002-GL	●●	6.0	±0.03	0.2	26.4	4.5		1
N6004-GL	●●	6.0	±0.03	0.4	26.4	4.5	1	1
GCM N7004-GL	●●	7.0	±0.04	0.4	28.8	5.5		1
GCM N8004-GL	●●	8.0	±0.04	0.4	28.8	6.0	1	1
N2002-GF	●●	2.0	±0.03	0.2	21.1	3.6		1
N2004-GF	●●	2.0	±0.03	0.4	21.1	3.6	1	1
GCM N3002-GF	●●	3.0	±0.03	0.2	21.1	3.8		1
N3004-GF	●●	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-GF	●●	4.0	±0.03	0.2	26.4	4.0		1
N4004-GF	●●	4.0	±0.03	0.4	26.4	4.0	5	1
GCM N5002-GF	●●	5.0	±0.03	0.2	26.4	4.1		1
N5004-GF	●●	5.0	±0.03	0.4	26.4	4.1	1	1
GCM N6002-GF	●●	6.0	±0.03	0.2	26.4	4.5		1
N6004-GF	●●	6.0	±0.03	0.4	26.4	4.5	1	1
GCM N7002-GF	●●	7.0	±0.04	0.2	28.8	5.5		1
N7004-GF	●●	7.0	±0.04	0.4	28.8	5.5	1	1
GCM N8002-GF	●●	8.0	±0.04	0.2	28.8	6.0		1
N8004-GF	●●	8.0	±0.04	0.4	28.8	6.0	1	1

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC5015S AC5025S	Lead Angle PSI	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
			Width of Cut	Tolerance					
GCM R2002-CG-05	●●	5°	2.0	±0.03	0.2	21.1	3.6	2	2
L2002-CG-05	●●	5°	2.0	±0.03	0.2	21.1	3.6		2
GCM R3002-CG-05	●●	5°	3.0	±0.03	0.2	21.3	3.8	5	2
L3002-CG-05	●●	5°	3.0	±0.03	0.2	21.3	3.8		2
GCM R4002-CG-05	●●	5°	4.0	±0.04	0.2	26.7	4.0	2	2
L4002-CG-05	●●	5°	4.0	±0.04	0.2	26.7	4.0		2
GCM R20003-CF-10	●●	10°	2.0	±0.08	0.03	22.4	3.6	2	2
L20003-CF-10	●●	10°	2.0	±0.08	0.03	22.4	3.6		2
GCM R30003-CF-10	●●	10°	3.0	±0.08	0.03	22.4	3.8	5	2
L30003-CF-10	●●	10°	3.0	±0.08	0.03	22.4	3.8		2
GCM R20003-CF-15	●●	15°	2.0	±0.08	0.03	22.4	3.6	2	2
L20003-CF-15	●●	15°	2.0	±0.08	0.03	22.4	3.6		2
GCM R30003-CF-15	●●	15°	3.0	±0.08	0.03	22.4	3.8	2	2
L30003-CF-15	●●	15°	3.0	±0.08	0.03	22.4	3.8		2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC5015S AC5025S	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
		Width of Cut	Tolerance					
GCM N3015-RG	●●	3.0	±0.03	1.5	21.1	3.8	3	3
N4020-RG	●●	4.0	±0.03	2.0	26.4	4.0		3
GCM N5025-RG	●●	5.0	±0.03	2.5	27.2	4.1	5	3
N6030-RG	●●	6.0	±0.03	3.0	27.5	4.5		3
GCM N7035-RG	●●	7.0	±0.04	3.5	29.1	5.5	3	3
N8040-RG	●●	8.0	±0.04	4.0	29.3	6.0		3

Profiling / Radius Grooving / Necking

Dimensions (mm)

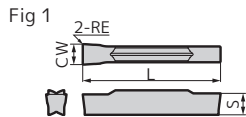
Cat. No.	AC5015S AC5025S	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
		Width of Cut	Tolerance					
GCM N2010-RN	●●	2.0	±0.03	1.0	21.7	3.6	3	3
N3015-RN	●●	3.0	±0.03	1.5	22.6	3.8		3
N4020-RN	●●	4.0	±0.03	2.0	28.2	4.0	5	3
N5025-RN	●●	5.0	±0.03	2.5	28.3	4.1		3
N6030-RN	●●	6.0	±0.03	3.0	28.3	4.5	3	3

Part Number Suffix Code (Chipbreakers)

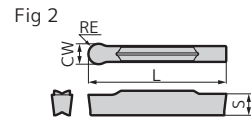
Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	MG	Multi-functional / General-purpose	Cut-off (Handed Edge)	CG	Cut-off / General-purpose
	ML	Multi-functional / Low-feed	Cut-off / Low cutting force	CF	Cut-off / Low cutting force
Grooving / Cut-off	GG	Grooving / General-purpose	External Profiling / External Radius Grooving	RG	Profiling / General-purpose
	GL	Grooving / Low-feed			
	GF	Grooving / Low cutting force	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose

For details on the holders of the products listed on this page, refer to Tooling News No.482 "SEC-Grooving Tools GND type" and the General Catalogue.
Select holders and inserts with matching width of cut (CW). Not usable with GNDIS type holders.

● mark: Standard stocked item

Inserts for SEC-Grooving Tools GNDXL type (For Deep Grooving / Cut-off)**Grooving / Traverse Cutting (1-cornered)** Dimensions (mm)

Cat. No.			AC5015S	AC5025S	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
			Width of Cut	Tolerance	RE	L	S				
GCM N3002-ML1	●	●	3.0	±0.03	0.2	21.1	3.8	5	1		
N4004-ML1	●	●	4.0	±0.03	0.4	26.4	4.0		1		
N5004-ML1	●	●	5.0	±0.03	0.4	26.4	4.1		1		
N6004-ML1	●	●	6.0	±0.03	0.4	26.4	4.5		1		

**Profiling / Radius Grooving (1-cornered)** Dimensions (mm)

Cat. No.			Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
	AC5015S	AC5025S	Width of Cut	Tolerance					
GCM N3015-RN1	●	●	3.0	±0.03	1.5	22.4	3.8	5	2
N6030-RN1	●	●	6.0	±0.03	3.0	28.1	4.5		2

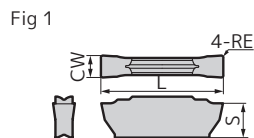
Grooving / Cut-off (1-cornered) Dimensions (mm)

Cat. No.			AC5015S	AC5025S	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
			Width of Cut	Tolerance	RE	L	S				
GCM N2002-GF1					2.0	±0.03	0.2	21.1	3.6	5	1
N3002-GF1	●	●			3.0	±0.03	0.2	21.1	3.8		1
N4002-GF1	●	●			4.0	±0.03	0.2	26.4	4.0		1
N5002-GF1	●	●			5.0	±0.03	0.2	26.4	4.1		1
N6002-GF1	●	●			6.0	±0.03	0.2	26.4	4.5		1

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	ML1	Multi-functional / Low-feed	Profiling / Radius Grooving	RN1	General-purpose
Grooving / Cut-off	GF1	Grooving / Low cutting force			

Select holders and inserts with matching width of cut (CW). Use in combination with GNDXL type holders. Not usable with GNDIS type holders.

Inserts for SEC-Grooving Tools GNDIS type (For Medium Internal Grooving)**Grooving / Traverse Cutting** Dimensions (mm)

Cat. No.			Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
	AC5015S	AC5025S	Width of Cut	Tolerance					
GXM N2002S-ML	●	●	2.0	±0.03	0.2	11.1	3.1	5	1
N3002S-ML	●	●	3.0	±0.03	0.2	11.1	3.1		1

Grooving / Cut-off Dimensions (mm)

Cat. No.	AC5015S	AC5025S	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
			Width of Cut	Tolerance					
			GXM N2002S-GF	●	●	2.0	±0.03		
N3002S-GF	●	●	3.0	+0.03	0.2	11.1	3.1	1	

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	ML	Multi-functional / Low-feed	Grooving / Cut-off	GF	Grooving / Low cutting force

Select holders and inserts with matching width of cut (CW). GCM/GCG inserts are not mutually compatible.

SEC-Cut-off Tool Holders SumiGrip Jr. STF type / SumiGrip WCF type

Fig 1 (Neutral (N))

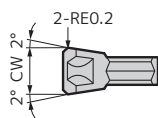


Fig 2 (Right Hand (R))

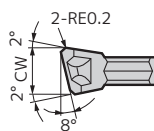
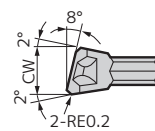
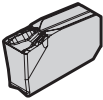
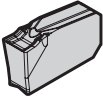
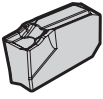


Fig 3 (Left Hand (L))

**General-purpose / Low-feed**

Dimensions (mm)

Appearance	Cat. No.	AC5015S	AC5025S	Width of Cut CW	Applicable Holder	Fig
WCF NO-GG General-purpose 	WCF N2-GG	●	●	2.0	STFH 00-2, STFS R/L0000-2, WCFH 00-2, WCFS R/L0000-2	1
	WCF N3-GG	●	●	3.0	STFH 00-3, STFS R/L0000-3, WCFH 00-3, WCFS R/L0000-3, WCFS R/LOO-3	1
	WCF N4-GG	●	●	4.0	STFH 00-4, STFS R/L0000-4, WCFH 00-4, WCFS R/LOO-4	1
	WCF N5-GG	●	●	5.0	STFH 00-5, STFS R/L0000-5, WCFH 00-5, WCFS R/LOO-5	1
WCF NO-GF Exotic Alloy Low-feed 	WCF N2-GF	●	●	2.0	STFH 00-2, STFS R/L0000-2, WCFH 00-2, WCFS R/L0000-2	1
	WCF N3-GF	●	●	3.0	STFH 00-3, STFS R/L0000-3, WCFH 00-3, WCFS R/L0000-3, WCFS R/LOO-3	1
	WCF N4-GF	●	●	4.0	STFH 00-4, STFS R/L0000-4, WCFH 00-4, WCFS R/LOO-4	1
	WCF N5-GF	●	●	5.0	STFH 00-5, STFS R/L0000-5, WCFH 00-5, WCFS R/LOO-5	1
WCF □O-CF Exotic Alloy Low-feed (Handed) 	WCF R3-CF	●	●	3.0	STFH 00-3, STFS R/L0000-3, WCFH 00-3, WCFS R/L0000-3,	2
	WCF L3-CF	●	●	3.0	WCFS R/LOO-3	3
	WCF R4-CF	●	●	4.0		2
	WCF L4-CF	●	●	4.0	STFH 00-4, STFS R/L0000-4, WCFH 00-4, WCFS R/LOO-4	3

Refer to the General Catalogue for details on the holders of the products indicated on this page.

● mark: Standard stocked item (new product/expanded item)

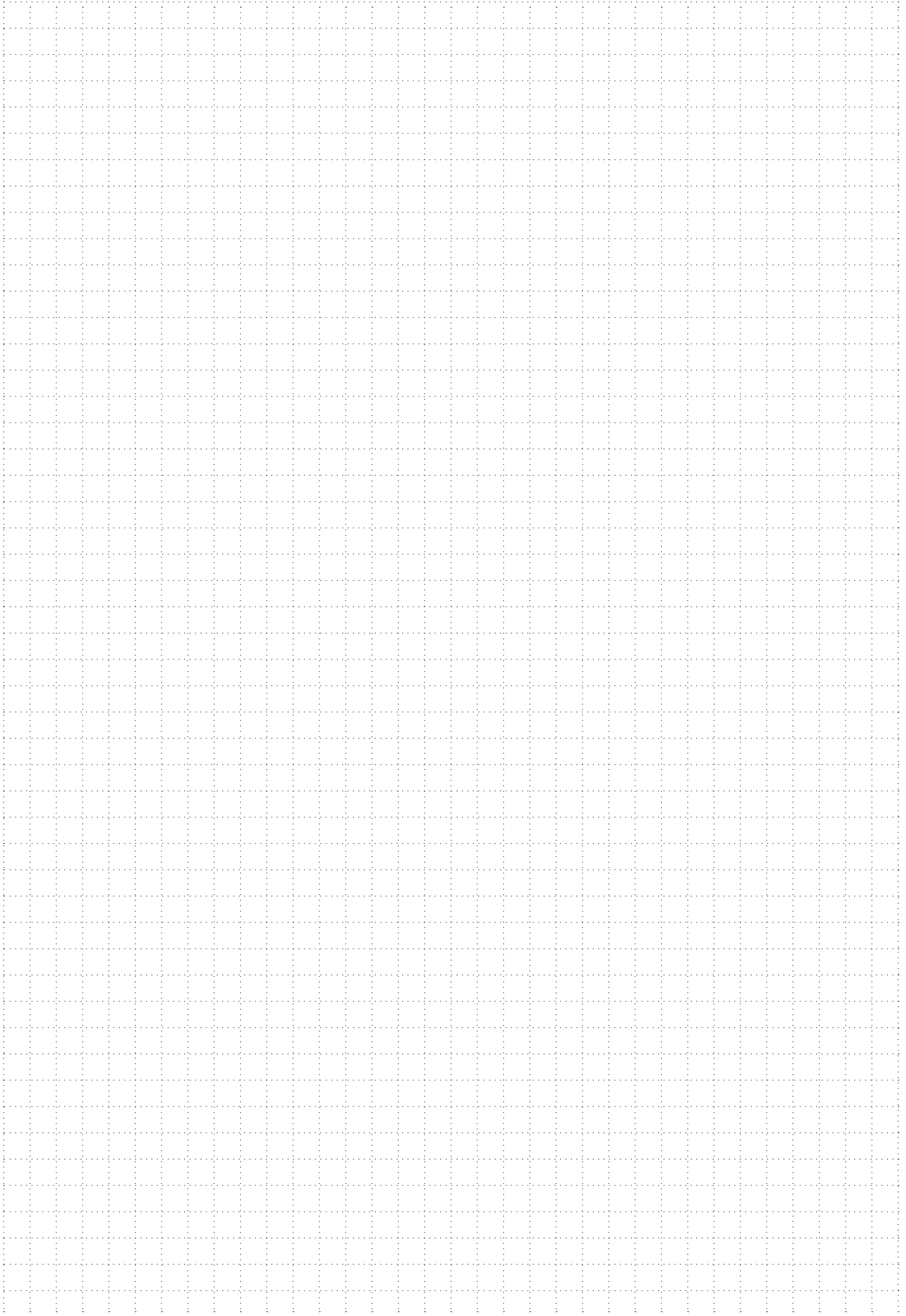
AC5005S/AC5015S/AC5025S

■ Recommended Cutting Conditions

(Red text indicates 1st recommendation)

Work Material	Application	Chipbreaker	Grade	Cutting Conditions		
				Depth of Cut ap (mm)	Feed Rate f (mm/rev)	Min. - Optimum - Max. Cutting Speed vc (m/min)
Heat-Resistant Alloy (Ni-based Material) (Fe-based Material) (Co-based Material)	Finishing	EF	AC5005S	0.2- 0.5 -1.5	0.10- 0.12 -0.20	50- 70 -110
	Continuous	EX	AC5015S	0.5- 1.0 -3.0	0.10- 0.20 -0.30	40- 60 -90
	Light Interruption	EG	AC5015S	0.5- 2.0 -4.0	0.15- 0.25 -0.30	40- 60 -90
	Interrupted	MU/EM	AC5025S	1.0- 2.0 -4.0	0.20- 0.25 -0.40	30- 55 -80

MEMO





- 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

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