

Coated Grade for High Precision Small Parts Turning

AC1135U

**New coated carbide Grade specialized for
Small Lathe/Autolathe Machining**

For stainless steel and other work materials



Small Lathe/Autolathe Tool series

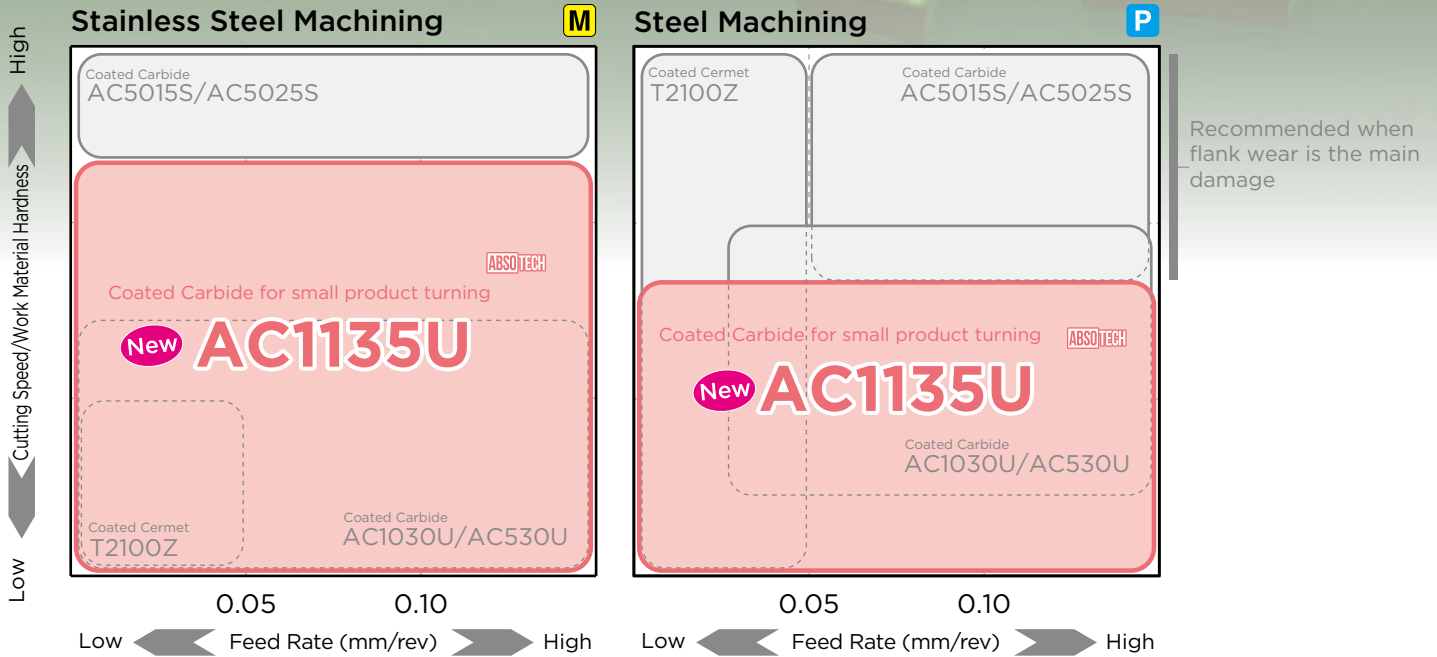
Sumi Smo

Coated Grade for High Precision Turning

AC1135U



Application Range



Features of AC1135U

Special Surface Treatment
The smooth surface suppresses adhesion and reduces micro-chipping

Adhesion-resistant Layer (TiCN-based)
The use of a TiCN-based composition with excellent adhesion resistance reduces adhesion in fine cutting and low-speed conditions, enables high machined surface quality

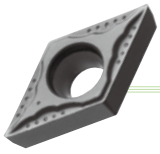
Chipping-resistant Layer (TiAlBN-based)
The use of an ultra-fine grain TiAlBN-based composition with excellent toughness suppresses unexpected chipping and achieves high stability

High-adhesion Technology
Improved stability with special technology enhancing coating adhesion strength

Carbide Substrate

AC1135U

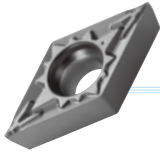
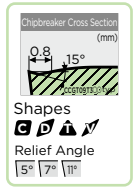
■ Chipbreaker Selection (Main Chipbreaker)



1st recommendation for small lathes/autolathes

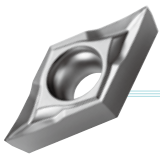
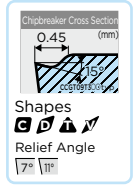
SI type 3D G Class

Excellent chip control performance over a wide range of cutting conditions



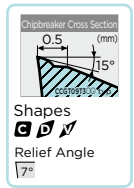
FF type 3D G Class

Outstanding chip control in fine finishing

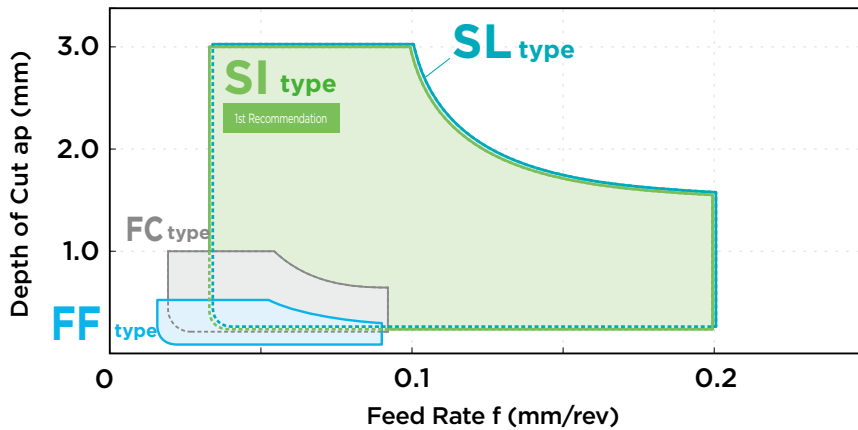


SL type 3D G Class

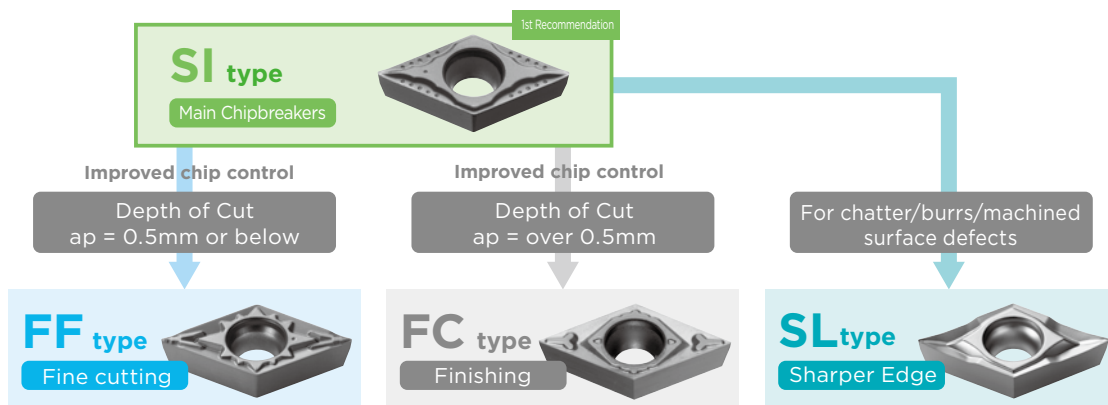
Excellent cutting edge sharpness over a wide range of cutting conditions. Emphasis on high machined surface quality



■ Chipbreaker Application Range



■ Selecting Chipbreakers



■ Recommended Cutting Conditions

Work Material Grade	P Free-Cutting Steel		P Carbon Steel		M Stainless Steel		N Brass	
	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)
AC1135U	50 - 200	0.02 - 0.15	50 - 200	0.02 - 0.10	50 - 150	0.02 - 0.10	70 - 300	0.05 - 0.20

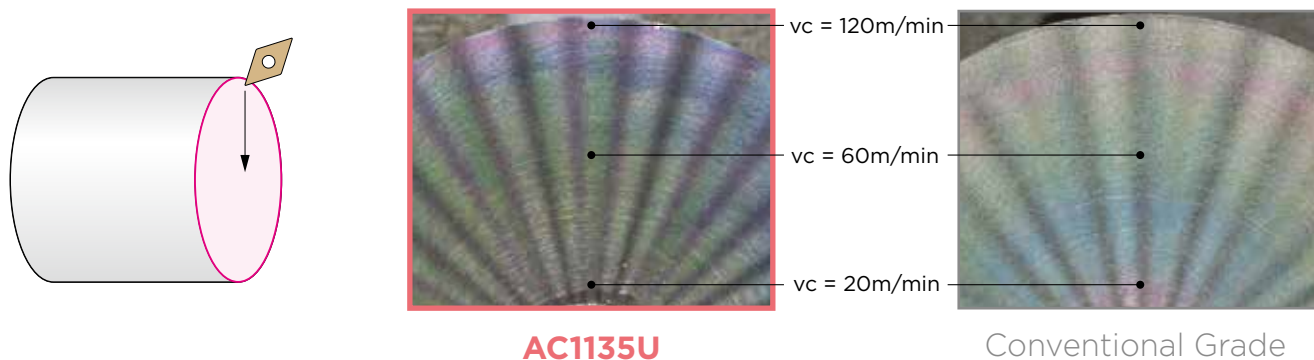
■ Characteristic Values

Application	Grade	Hardness (HRA)	TRS (GPa)	Coating type	Coating Thickness (µm)	Features
For Precision Turning	AC1135U	91.6	3.8	ABSOTECH	1	1st recommended grade for high precision machining. The special surface treatment and improved coating enables high machined surface quality and long, stable tool life for various workmaterials, even for stainless steel.

AC1135U

■ Machined surface Quality in facing (Stainless steel)

Excellent machined surface quality even at low speeds



Work Material: X2CrNiMo17-12-2 / Continuous Cutting / Insert: DCGT11T302
Cutting Conditions: $n = 1,800\text{min}^{-1}$ / $f = 0.05\text{mm/rev}$ / $ap = 0.5\text{mm}$ / Wet (Oil)

■ Machined surface quality in external turning (Stainless steel)

Machined surface quality superior to conventional grades

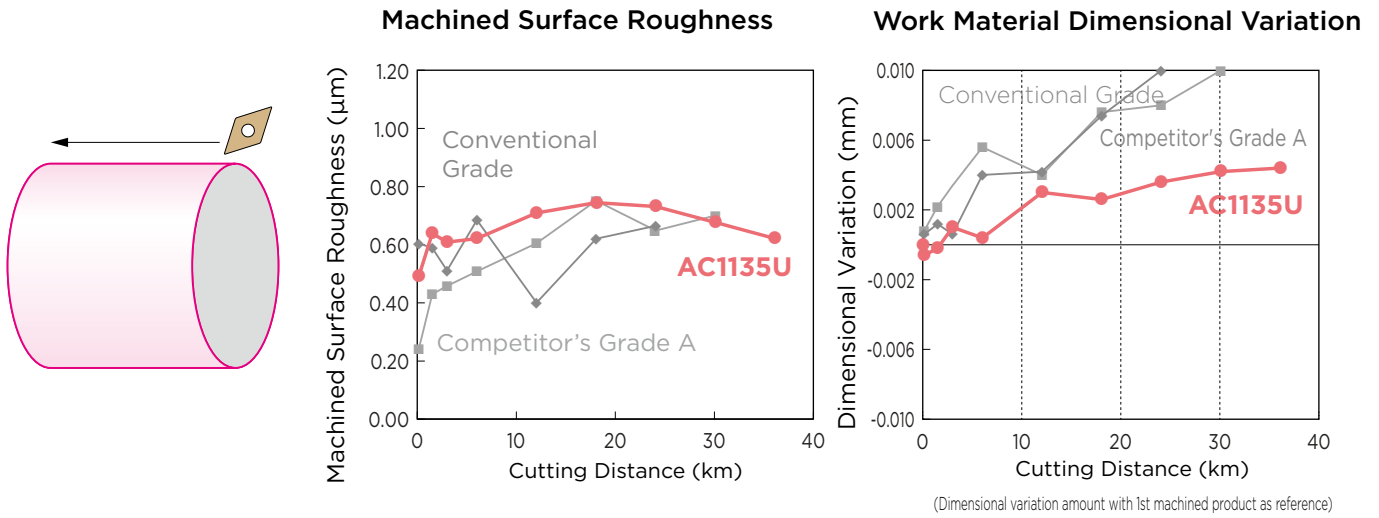


Work Material: X2CrNiMo17-12-2 / Continuous Cutting $\varnothing 10\text{mm}$ / Insert: DCGT11T302
Cutting Conditions: $vc = 120\text{m/min}$ / $f = 0.05\text{mm/rev}$ / $ap = 0.5\text{mm}$ / Wet (Oil)

AC1135U

■ Stability in external turning (stainless steel)

Machined surface quality and dimensional tolerance can be maintained long-term



Work Material: X2CrNiMo17-12-2 / Continuous Cutting ø10mm / L = 14mm / Insert: DCGT11T302
 Cutting Conditions: $v_c = 120\text{m/min}$ / $f = 0.05\text{mm/rev}$ / $a_p = 0.5\text{mm}$ / Wet (Oil)

■ Machined Surface Quality in Cut-off Machining (Stainless Steel)





Achieves 1.7x higher tool life than conventional grades and reduced tearing on machined surface







Work Material: X2CrNiMo17-12-2 / Cut-off ø10mm / Insert: GCMN2002-GF
 Cutting Conditions: $n = 3,000\text{min}^{-1}$ / $f = 0.05\text{mm/rev}$ / Wet (Oil)

AC1135U





80° Diamond type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock	Dimensions (mm)			
			AC1135U	Inscribed Circle	Thick-ness	Hole Dia.	Corner Radius
	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
	7°	CCGT 060201MN-FC	○	6.35	2.38	2.8	< 0.1
		060202MN-FC	●				< 0.2
		060204MN-FC	●				< 0.4
FC	7°	CCGT 09T301MN-FC	○	9.525	3.97	4.4	< 0.1
		09T302MN-FC	●				< 0.2
		09T304MN-FC	●				< 0.4
	7°	CCGT 060201MN-SI	○	6.35	2.38	2.8	< 0.1
		060202MN-SI	○				< 0.2
		060204MN-SI	○				< 0.4
SI	7°	CCGT 09T301MN-SI	○	9.525	3.97	4.4	< 0.1
		09T302MN-SI	●				< 0.2
		09T304MN-SI	●				< 0.4
	7°	CCGT 060201MN-SL	○	6.35	2.38	2.8	< 0.1
		060202MN-SL	○				< 0.2
		060204MN-SL	○				< 0.4
SL	7°	CCGT 09T301MN-SL	○	9.525	3.97	4.4	< 0.1
		09T302MN-SL	○				< 0.2
		09T304MN-SL	○				< 0.4






55° Diamond type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock	Dimensions (mm)			
			AC1135U	Inscribed Circle	Thick-ness	Hole Dia.	Corner Radius
	7°	CCGT 070201MN-FF	○	6.35	2.38	2.8	< 0.1
		070202MN-FF	○				< 0.2
		070204MN-FF	○				< 0.4
FF	7°	CCGT 11T301MN-FF	○	9.525	3.97	4.4	< 0.1
		11T302MN-FF	○				< 0.2
		11T304MN-FF	○				< 0.4
	7°	CCGT 070201MN-FC	○	6.35	2.38	2.8	< 0.1
		070202MN-FC	●				< 0.2
		070204MN-FC	●				< 0.4
FC	7°	CCGT 11T301MN-FC	○	9.525	3.97	4.4	< 0.1
		11T302MN-FC	●				< 0.2
		11T304MN-FC	●				< 0.4
	7°	CCGT 070201MN-SI	○	6.35	2.38	2.8	< 0.1
		070202MN-SI	●				< 0.2
		070204MN-SI	●				< 0.4
SI	7°	CCGT 11T301MN-SI	○	9.525	3.97	4.4	< 0.1
		11T302MN-SI	●				< 0.2
		11T304MN-SI	●				< 0.4
	7°	CCGT 070201MN-SL	○	6.35	2.38	2.8	< 0.1
		070202MN-SL	○				< 0.2
		070204MN-SL	○				< 0.4
SL	7°	CCGT 11T301MN-SL	○	9.525	3.97	4.4	< 0.1
		11T302MN-SL	○				< 0.2
		11T304MN-SL	○				< 0.4

Triangular type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock	Dimensions (mm)			
			AC1135U	Inscribed Circle	Thick-ness	Hole Dia.	Corner Radius
	7°	TCGT 110201MN-FF	○	6.35	2.38	2.8	< 0.1
		110202MN-FF	○				< 0.2
		110204MN-FF	○				< 0.4
	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
FC	11°	TPGT 110302MN-FC	○	6.35	3.18	3.4	< 0.2
		110304MN-FC	○				< 0.4
	11°	TPGT 080201MN-SI	○	4.76	2.38	2.4	< 0.1
		080202MN-SI	○				< 0.2
		080204MN-SI	○				< 0.4

35° Diamond type Positive Inserts

Shape	Relief Angle	Cat. No.	Stock	Dimensions (mm)				
			AC1135U	Inscribed Circle	Thick-ness	Hole Dia.	Corner Radius	
	5°	VBGT 110301MN-SI	○	6.35	3.18	2.8	< 0.1	
		110302MN-SI	○				< 0.2	
		110304MN-SI	●				< 0.4	
SI	5°	VBGT 160401MN-SI	○	9.525	4.76	4.4	< 0.1	
		160402MN-SI	●				< 0.2	
		160404MN-SI	○				< 0.4	
	7°	VCGT 110301MN-FC	○	6.35	3.18	2.8	< 0.1	
		110302MN-FC	○				< 0.2	
		110304MN-FC	○				< 0.4	
FC	7°	VCGT 080204MN-FC	○	4.76	2.38	2.3	< 0.4	
	7°	VCGT 110301MN-SI	●	6.35	3.18	2.8	< 0.1	
		110302MN-SI	●				< 0.2	
		110304MN-SI	●				< 0.4	
SI	7°	VCGT 160401MN-SI	○	9.525	4.76	4.4	< 0.1	
		160402MN-SI	●				< 0.2	
		160404MN-SI	●				< 0.4	
	7°	VCGT 110301MN-SL	○	6.35	3.18	2.8	< 0.1	
		110302MN-SL	○				< 0.2	
		110304MN-SL	○				< 0.4	
	11°	VPGT 110301MN-FF	○	6.35	3.18	2.8	< 0.1	
		110302MN-FF	○				< 0.2	
SI	11°	VPGT 110301MN-SI	○	6.35	3.18	2.8	< 0.1	
		110302MN-SI	○				< 0.2	

A “<” next to the corner radius indicates negative tolerance.

●=Stock Europe ○=Stock Japan Blank=made to order item

SEC-Grooving Tool GWC type / Indexable Head Type Quick Change Holder APM series Insert for GWC type Head

Fig 1

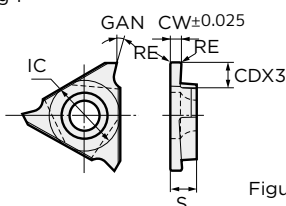


Figure shows right-handed tool

Grade	Cutting Edge Shape	GAN
Coated Carbide	AC1135U	Honing
		15°

Insert (Grooving)

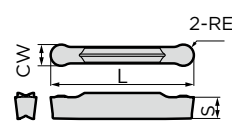
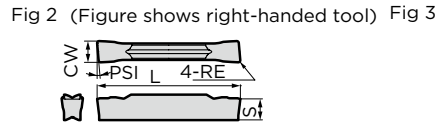
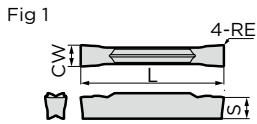
Dimensions (mm)

Cat. No.	AC1135U		Width of Cut CW	Maximum Groove Depth CDX3		Corner Radius RE	Inscribed Circle IC	Thickness S	Applicable Holder/Head	Fig
	R	L		External Turning	Internal Turning					
TGA R/L3033	○	○	0.33	0.8	0.5	0.05	9.525	3.18		1
TGA R/L3050	○	○	0.50	1.2	0.8	0.05	9.525	3.18		1
TGA R/L3075	○	○	0.75	2.0	1.5	0.1	9.525	3.18		1
TGA R/L3095	○	○	0.95	2.0	1.5	0.1	9.525	3.18		1
TGA R/L3100	○	○	1.00	2.0	1.5	0.1	9.525	3.18		1
TGA R/L3110	○	○	1.10	2.0	1.5	0.1	9.525	3.18		1
TGA R/L3120	○	○	1.20	2.0	1.5	0.1	9.525	3.18		1
TGA R/L3125	○	○	1.25	2.0	1.5	0.1	9.525	3.18		1
TGA R/L3135	○	○	1.35	2.0	1.5	0.1	9.525	3.18	Holder	1
TGA R/L3145	○	○	1.45	2.0	1.5	0.1	9.525	3.18	GWCR · · · · 3	1
TGA R/L3150	○	○	1.50	2.0	1.5	0.1	9.525	3.18	GWCS · · · · 3	1
TGA R/L3160	○	○	1.60	2.0	1.5	0.1	9.525	3.18	GWCI · · · · 325	1
TGA R/L3165	○	○	1.65	2.0	1.5	0.1	9.525	3.18	Head	1
TGA R/L3175	○	○	1.75	2.0	1.5	0.1	9.525	3.18	APM○○-GWCR-R3J	1
TGA R/L3185	○	○	1.85	2.0	1.5	0.1	9.525	3.18	APM○○-GWCR · · · · -L3J	1
TGA R/L3200	○	○	2.00	2.5	2.0	0.1	9.525	3.18		1
TGA R/L3220	○	○	2.20	2.5	2.0	0.1	9.525	3.18		1
TGA R/L3250	○	○	2.50	2.5	2.0	0.1	9.525	3.18		1
TGA R/L3280	○	○	2.80	2.5	2.0	0.1	9.525	3.18		1

Right-handed (R) inserts are used with right-handed (part number suffix: -R3J) holders and heads.

AC1135U

SEC-Grooving Tool GND type / Indexable Head Type Quick Change Holder APM series Insert for GND type Head



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC1135U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs./Pack	Fig
		Width of Cut	Tolerance					
				RE	L	S		
GCM N3002-MG	○	3.0	±0.03	0.2	21.1	3.8	5	1
GCM N3004-MG	○	3.0	±0.03	0.4	21.1	3.8		
GCM 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	
GCM N6008-MG	●	6.0	±0.03	0.8	26.4	4.5	1	
GCM N8008-MG	●	8.0	±0.03	0.8	28.6	6.0	1	
GCM N2002-ML	●	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N3002-ML	●	3.0	±0.03	0.2	21.1	3.8	1	
GCM N3004-ML	○	3.0	±0.03	0.4	21.1	3.8	1	
GCM N4004-ML	●	4.0	±0.03	0.4	26.4	4.0	1	
GCM 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	1	
GCM N6004-ML	●	6.0	±0.03	0.4	26.4	4.5	1	
GCM N6008-ML	●	6.0	±0.03	0.8	26.4	4.5	1	

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC1135U	Lead Angle PSI	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs./Pack	Fig
			Width of Cut	Tolerance					
					RE	L	S		
GCM R2002-CG-05	●	5°	2.0	±0.03	0.2	21.1	3.6	5	2
GCM L2002-CG-05	●	5°	2.0	±0.03	0.2	21.1	3.6		
GCM R3002-CG-05	●	5°	3.0	±0.03	0.2	21.3	3.8	5	2
GCM L3002-CG-05	●	5°	3.0	±0.03	0.2	21.3	3.8		
GCM L4002-CG-05	●	5°	4.0	±0.04	0.2	26.7	4.0	2	
GCM R2003-CF-15	●	15°	2.0	±0.08	0.03	22.4	3.6	2	

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

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC1135U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs./Pack	Fig
		Width of Cut	Tolerance					
				RE	L	S		
GCM N3015-RG	●	3.0	±0.03	1.5	21.1	3.8	5	3
GCM N4020-RG	●	4.0	±0.03	2.0	26.4	4.0		
GCM N5025-RG	●	5.0	±0.03	2.5	27.2	4.1		
GCM N6030-RG	●	6.0	±0.03	3.0	27.5	4.5		

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC1135U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs./Pack	Fig
		Width of Cut	Tolerance					
				RE	L	S		
GCM N2010-RN	●	2.0	±0.03	1.0	21.7	3.6	5	3
GCM N3015-RN	●	3.0	±0.03	1.5	22.6	3.8		
GCM N5025-RN	●	5.0	±0.03	2.5	28.3	4.5		

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
Traverse Cutting	ML	Multi-functional / Low feed		CF	Cut-off / Low cutting force
Grooving /	GG	Grooving / General-purpose	External Profiling / External Radius Grooving	RG	Profiling / General-purpose
Cut-off	GL	Grooving / Low feed	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose
	GF	Grooving / Low cutting force			

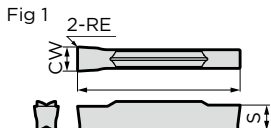
Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC1135U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs./Pack	Fig
		Width of Cut	Tolerance					
				RE	L	S		
GCM N2002-GG	●	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N3002-GG	●	3.0	±0.03	0.2	21.1	3.8		
GCM N3004-GG	●	3.0	±0.03	0.4	21.1	3.8	1	
GCM N4002-GG	●	4.0	±0.03	0.2	26.4	4.0	1	
GCM N4004-GG	●	4.0	±0.03	0.4	26.4	4.0	1	
GCM N5004-GG	●	5.0	±0.03	0.4	26.4	4.1	1	
GCM N6004-GG	●	6.0	±0.03	0.4	26.4	4.5	1	
GCM N8004-GG	●	8.0	±0.04	0.4	28.8	6.0	1	
GCM N2002-GL	●	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N2004-GL	○	2.0	±0.03	0.4	21.1	3.6		
GCM N3002-GL	●	3.0	±0.03	0.2	21.1	3.8	1	
GCM N3004-GL	○	3.0	±0.03	0.4	21.1	3.8	1	
GCM N2002-GF	●	2.0	±0.03	0.2	21.1	3.6	1	
GCM N2004-GF	○	2.0	±0.03	0.4	21.1	3.6	1	
GCM N3002-GF	●	3.0	±0.03	0.2	21.1	3.8	1	
GCM N3004-GF	●	3.0	±0.03	0.4	21.1	3.8	1	
GCM N4002-GF	●	4.0	±0.03	0.2	26.4	4.0	1	
GCM N8004-GF	●	8.0	±0.04	0.4	28.8	6.0	1	
GCM N125005-GF	●	1.25	±0.03	0.05	17.4	3.2	1	
GCM N150005-GF	●	1.5	±0.03	0.05	17.4	3.7	1	

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

SEC-Grooving Tool GNDXL type



Grooving / Traverse Cutting (1-cornered)

Dimensions (mm)

Cat. No.	AC1135U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	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

Grooving / Cut-off (1-cornered)

Dimensions (mm)

Cat. No.	AC1135U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs./Pack	Fig
		Width of Cut	Tolerance					
				RE	L	S		
GCM N3002-GF1	○	3.0	±0.03	0.2	21.1	3.8	5	1

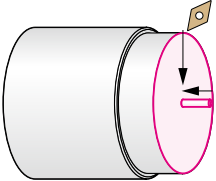
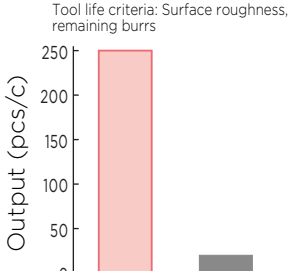
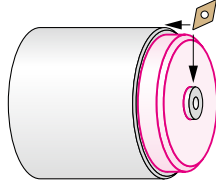
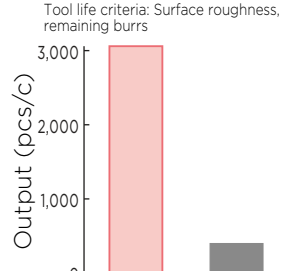
Part Number Suffix Code (Chipbreakers)

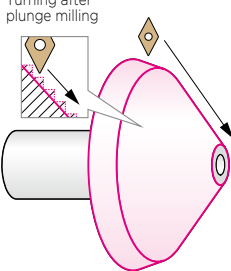
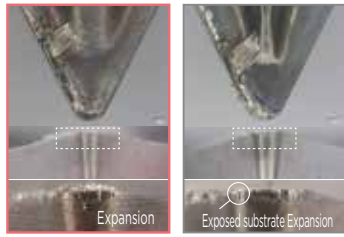
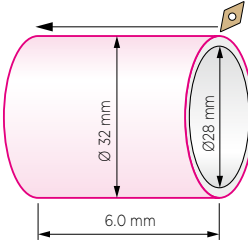
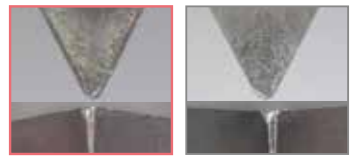
Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	ML1	Multi-functional / Low feed	Profiling / Radius Grooving	RN1	General-purpose
Grooving / Cut-off	GF1	Grooving / Low cutting force			

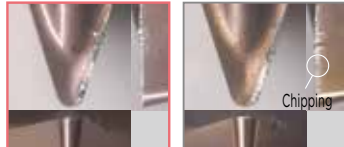
Select holders and inserts with matching width of cut (CW). Use in combination with GNDXL type holders. Not usable with GNDIS type holders.

AC1135U

Application Examples

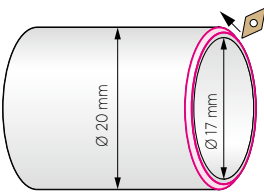
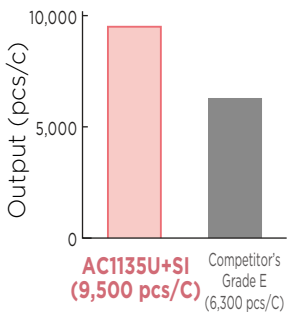
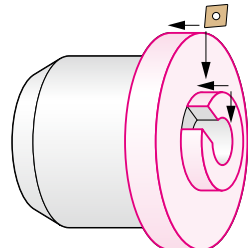

<p>X2CrNiMo17-12-2 - Semiconductor Equipment Component M</p>	<p>X2CrNiMo17-12-2 - Semiconductor Equipment Component M</p>
<p>12.5x longer tool life due to better chipping resistance</p>  <p>Tool life criteria: Surface roughness, remaining burrs</p>  <p>AC1135U+SI (250 pcs/C) Competitor's Grade A (20 pcs/C)</p>	<p>AC1135U has excellent wear resistance and achieves 7.5x higher tool life</p>  <p>Tool life criteria: Surface roughness, remaining burrs</p>  <p>AC1135U+SI (3,060 pcs/C) Competitor's Grade B (400 pcs/C)</p>
<p>Tool: DCGT070201MN-SI (AC1135U) Continuous Cutting Cutting Conditions: $v_c = 110\text{m/min}$ $f = 0.04\text{mm/rev}$ $a_p = 0.05\text{-}0.20\text{mm}$ Wet (Oil)</p>	<p>Tool: DCGT11T301MN-SI (AC1135U) Continuous Cutting Cutting Conditions: $v_c = 110\text{m/min}$ $f = 0.04\text{mm/rev}$ $a_p = 0.15\text{mm}$ Wet (Oil)</p>

<p>X5CrNi18-10 Beverage Device Component M</p>	<p>X5CrNi18-10 Medical Device Component M</p>
<p>Better wear resistance in comparison with competitors grade</p>  <p>Turning after plunge milling</p> <p>Tool life criteria: Surface roughness, chip evacuation</p>  <p>AC1135U+SI (3,000 pcs/C) Competitor's Grade A (3,000 pcs/C)</p>	<p>Good machined surface quality even when machining twice the number of workpieces as competitor's grade</p>  <p>Tool life criteria: Surface roughness, appearance</p>  <p>AC1135U+SI (10,000 pcs/C) Competitor's Grade A (5,000 pcs/C)</p>
<p>Tool: DCGT070202MN-SI (AC1135U) Continuous Cutting Cutting Conditions: $v_c = 50\text{m/min}$ $f = 0.03\text{mm/rev}$ $a_p = 0.2\text{mm}$ Wet (Oil)</p>	<p>Tool: DCGT070202MN-SI (AC1135U) Continuous Cutting Cutting Conditions: $v_c = 50\text{m/min}$ $f = 0.03\text{mm/rev}$ $a_p = 0.2\text{mm}$ Wet (Oil)</p>

<p>X5CrNi18-10 Electrical Device Component M</p>
<p>Suppressed chipping and better surface quality compared to conventional Grades</p>  <p>Tool life criteria: Surface roughness Ra0.2 or below, appearance</p>  <p>AC1135U+SI Conventional Grade</p>
<p>Tool: VCGT110302MN-SI (AC1135U) Continuous Cutting Cutting Conditions: $v_c = 50\text{m/min}$ $f = 0.02\text{mm/rev}$ $a_p = 1.0\text{mm}$ Wet (Oil)</p>

AC1135U

■ Application Examples

STKN Automotive Component P	Pure Iron Automotive Component P
<p>Suppresses crater wear and achieves 1.5x longer tool life</p>  <p>Tool life criteria: Exit burrs in external chamfering part</p>  <p>Output (pcs/c)</p> <p>AC1135U+SI (9,500 pcs/C) Competitor's Grade E (6,300 pcs/C)</p>	<p>Less chipping and 1.4x longer tool life</p>  <p>Tool life criteria: Burrs, machined surface quality</p>  <p>AC1135U+SI (700 pcs/C) Competitor's Grade F (200 to 500 pcs/C)</p>
<p>Tool: DCGT070201MN-SI (AC1135U) Continuous External Turning and Facing Cutting Conditions: $v_c = 110\text{m/min}$ $f = 0.04\text{mm/rev}$ $a_p = 0.05\text{-}0.20\text{mm}$ Wet (Oil)</p>	<p>Tool: CCGT09T302MN-SI (AC1135U) Interrupted cutting Cutting Conditions: $v_c = 150\text{m/min}$ $f = 1.0\text{mm/rev}$ $a_p = 0.2\text{mm}$ Wet (Oil)</p>

MEMO

A large grid of dotted lines for writing a memo. The grid consists of 20 columns and 30 rows of small squares, providing a structured space for notes or a report.



SUMITOMO ELECTRIC Hartmetall GmbH
Konrad-Zuse-Straße 9 | 47877 Willich | Germany
T +49 2154 4992-0
info@sumitomotool.com
www.sumitomotool.com



SUMITOMO ELECTRIC Hardmetal Ltd.
2 Devon Way | Longbridge Technology Park
Birmingham B31 2 TS | UK
T +44 121 6613650
salesUK@sumitomotool.com



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