

Coated Grades for Cast Iron

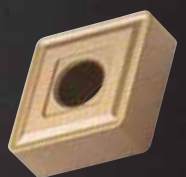
AC4010K/AC4015K/AC4125K^{New}

From Ultra-high-speed Machining of Gray Cast Iron
to Heavy Interrupted Machining of High-strength
Ductile Cast Iron



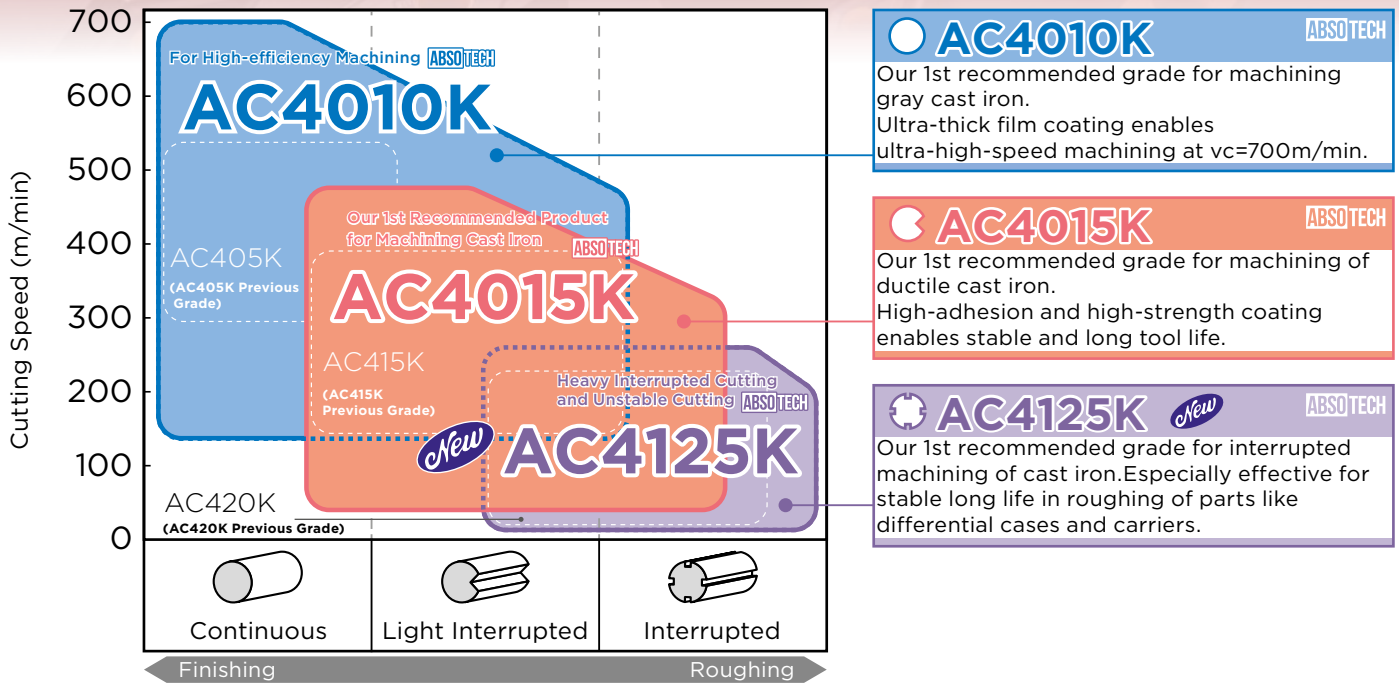
^{New} New Grade for Interrupted
Machining of Cast Iron

Introducing AC4125K



AC4010K/AC4015K/AC4125K

Application Range



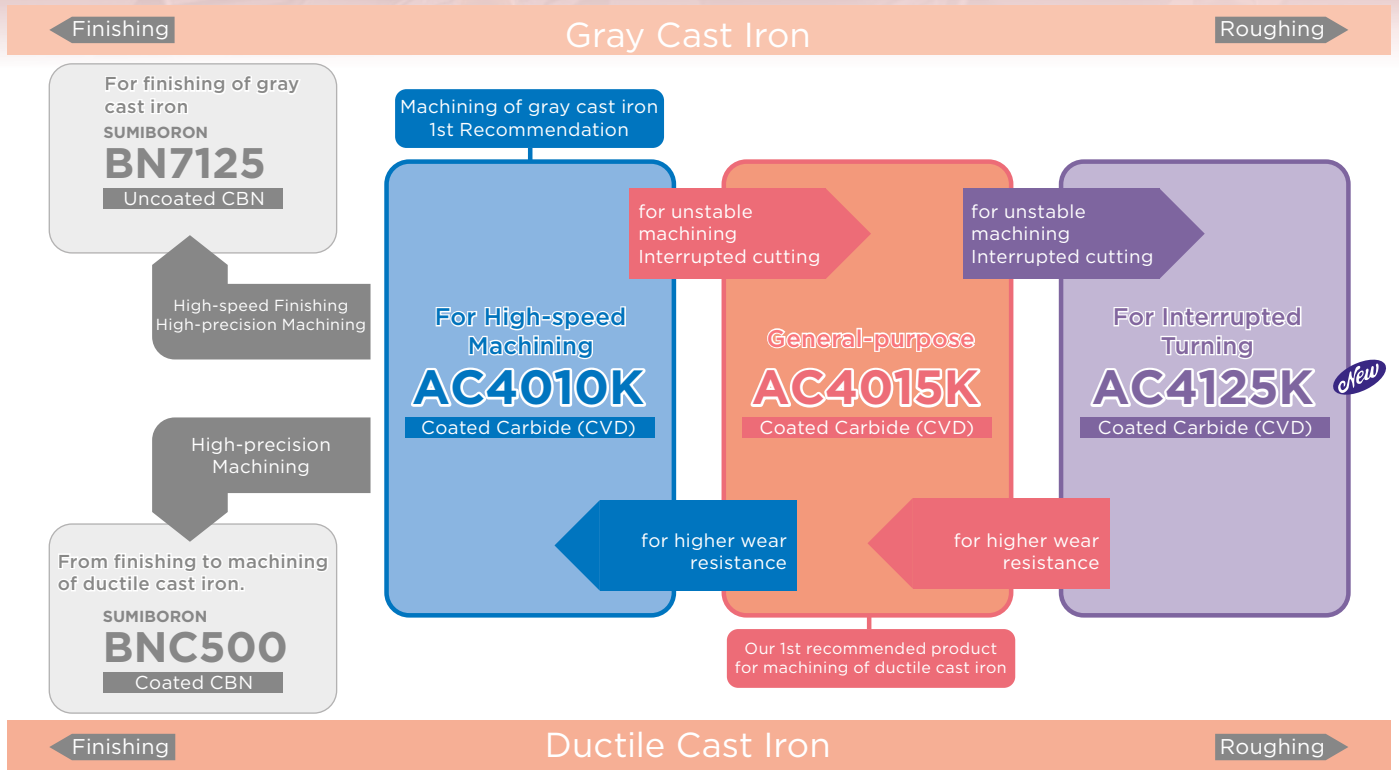
Features AC4010K / AC4015K

Technologies for high-adhesion, crystal orientation control and residual stress control realise stable tool life for various types of cast iron, from grey cast iron (GJL) to high-strength ductile cast iron (GJS).

- Special Surface Treatment**
 Compressive stress more than twice as high as conventional stress
 Chipping resistance: Twice as much as conventional types
- Crystal Orientation Control Alumina Layer**
 Crater wear resistance in high-speed machining: Twice as much as conventional types
- C-rich Ultra-fine TiCN Layer**
 Flank wear resistance: Twice as much as conventional types
- High Adhesion Technology**
 Smooth layer adhesion treatment ($Rz0.15\mu m \rightarrow 0.07\mu m$) greatly improves peel-off resistance

AC4010K/AC4015K/AC4125K

Applications of AC4000K Series (Example)

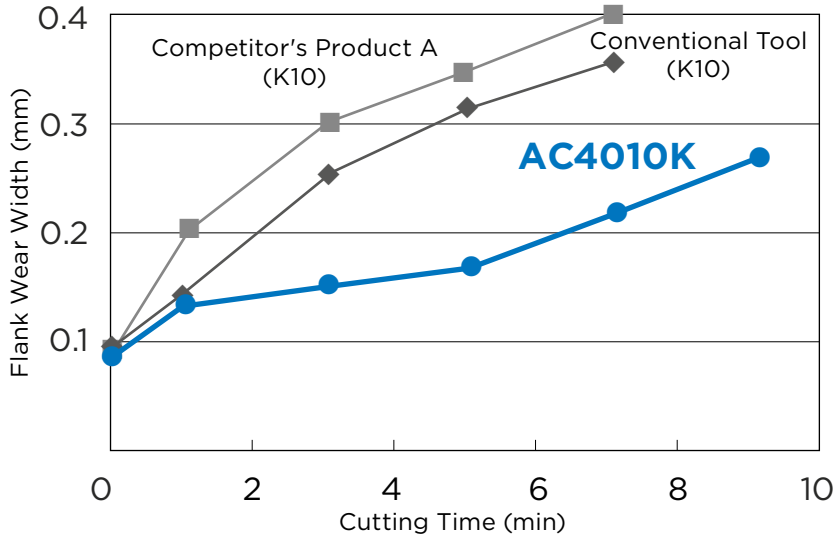


Features of AC4125K

Excellent chipping resistance is demonstrated by the evolution of high adhesion technology, fine crystal orientation control technology and residual stress control technology, and very stable machining is realized in heavy interrupted machining and unstable machining of cast iron. In addition, it adopts a gold color that makes used corners easily identifiable.

- Special Surface Treatment**
 Significantly improves the compressive stress while maintaining the gold color Chipping resistance: Twice as much as conventional types
- Crystal Orientation Control Ultra-fine Alumina Layer**
 Fine grain structure greatly improves the coating strength Chipping resistance: Twice as much as conventional types
- C-rich Ultra-fine TiCN Layer**
 Flank wear resistance: 1.5x as much as conventional types
- High Adhesion Technology**
 Smooth layer adhesion treatment (Rz0.15μm→0.07μm) greatly improves peel-off resistance

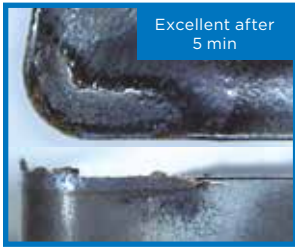
AC4010K/AC4015K/AC4125K



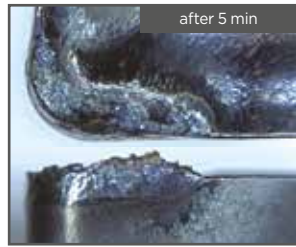
Work Material: GG25
Continuous

Insert: CNMG120408

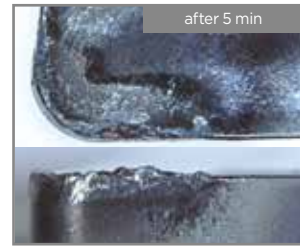
Cutting Conditions: $v_c=600\text{m/min}$
 $f=0.4\text{mm/rev}$
 $a_p=2.0\text{mm}$
Dry



AC4010K+GZ



Conventional Tool (K10)



Comp's A (K10)



AC4010K+GZ

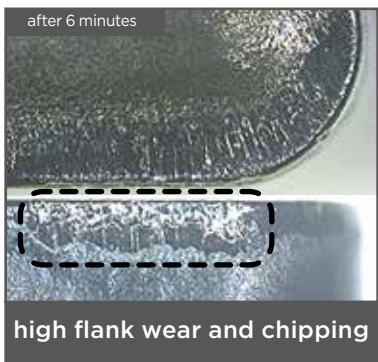


AC4015K+GZ

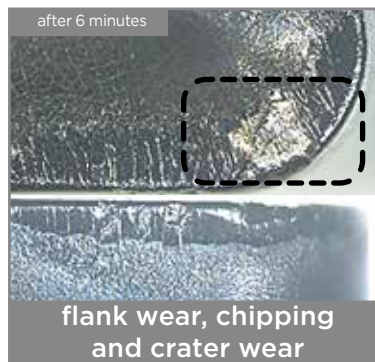
Work Material: GG25
Interrupted

Insert: CNMG120408

Cutting Conditions: $v_c=400\text{m/min}$
 $f=0.3\text{mm/rev}$
 $a_p=2.0\text{mm}$
Wet



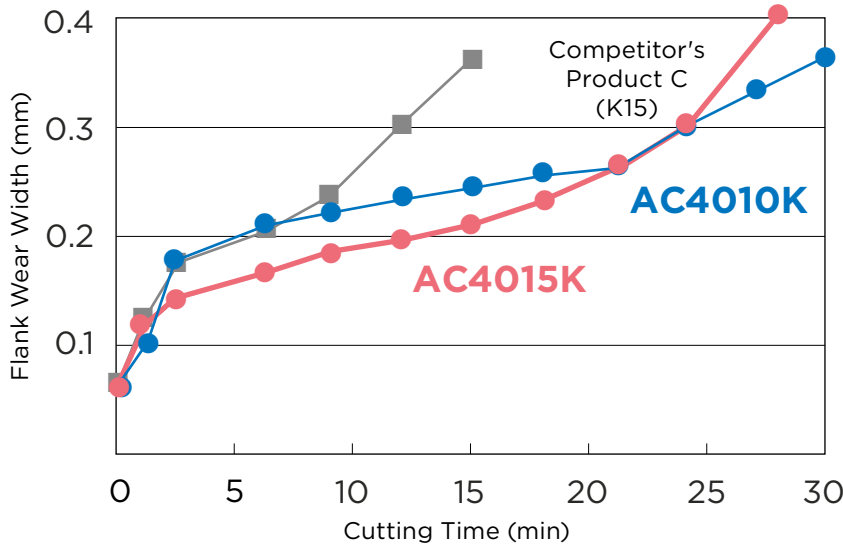
Conventional Tool (K10)



Comp's B (K10)

AC4010K/AC4015K/AC4125K

Wear Resistance of AC4010K/AC4015K (Continuous Ductile Cast Iron Cutting)



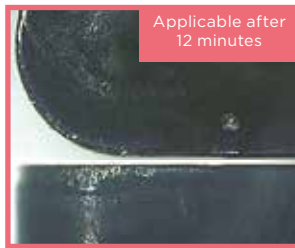
Work Material: GGG70
Continuous

Insert: CNMG120408

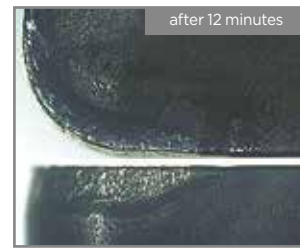
Cutting Conditions: $v_c=140\text{m/min}$
 $f=0.3\text{mm/rev}$
 $a_p=1.5\text{mm}$
Wet



AC4010K+GZ

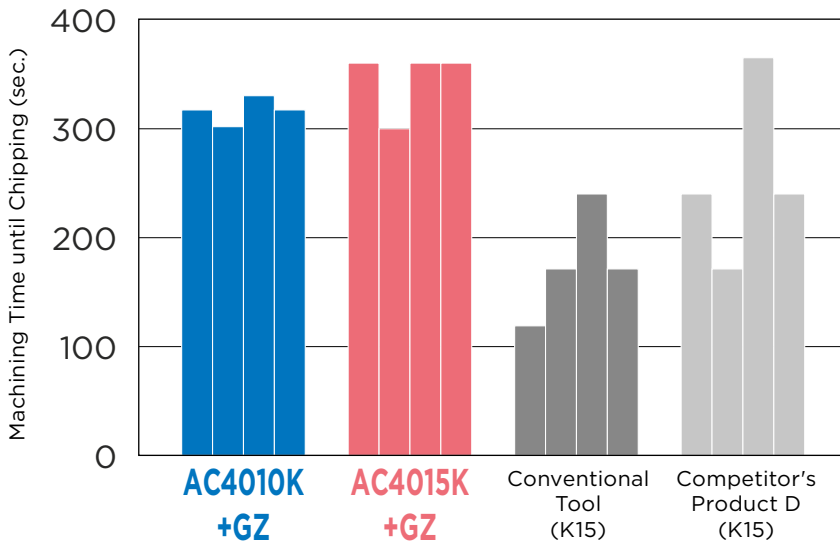


AC4015K+GZ



Comp's C (K15)

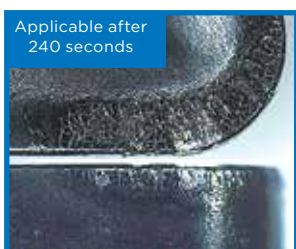
Chipping Resistance of AC4010K/AC4015K (Interrupted Ductile Cast Iron Cutting)



Work Material: GGG-40.3
Interrupted

Insert: CNMG12040

Cutting Conditions: $v_c=450\text{m/min}$
 $f=0.3\text{mm/rev}$
 $a_p=1.5\text{mm}$
Wet



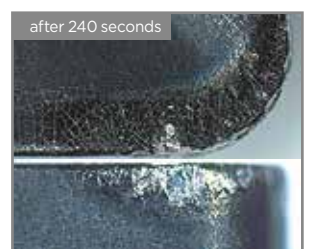
AC4010K



AC4015K



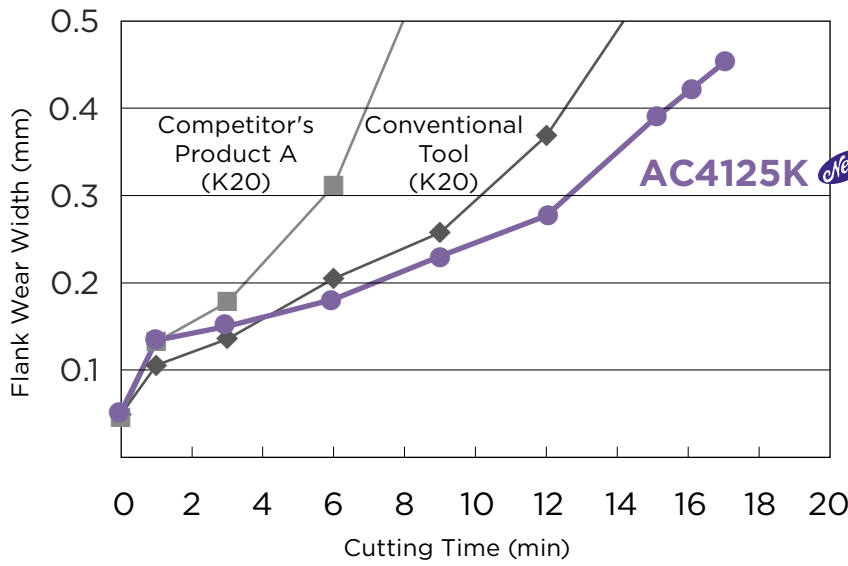
Conventional Tool (K15)



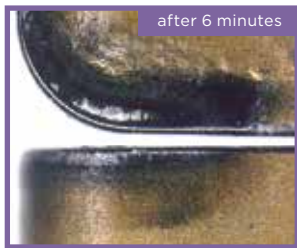
Comp's D (K15)

AC4010K/AC4015K/AC4125K

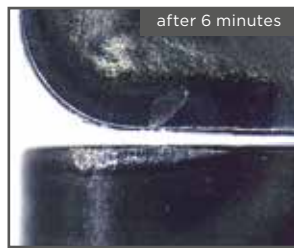
Wear Resistance of AC4125K (Continuous Ductile Cast Iron Cutting)



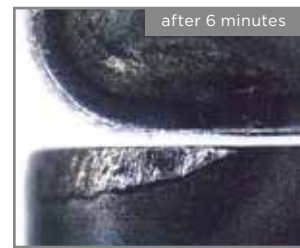
Work Material: GGG70
Continuous
Insert: CNMG120408
Cutting Conditions: $v_c=140\text{m/min}$
 $f=0.3\text{mm/rev}$
 $a_p=1.5\text{mm}$
Wet



AC4125K+GZ

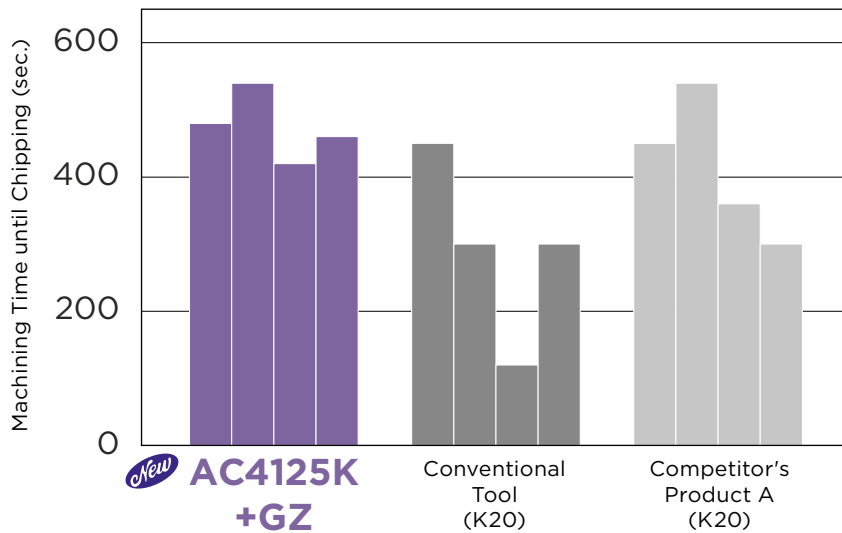


Conventional Tool (K20)

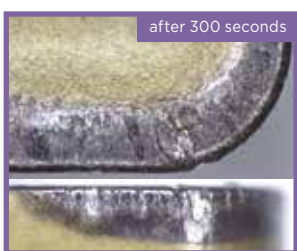


Comp's A (K20)

Chipping Resistance of AC4125K (Interrupted Ductile Cast Iron Cutting)



Work Material: GGG-40.3
Interrupted
Insert: CNMG120408
Cutting Conditions: $v_c=450\text{m/min}$
 $f=0.3\text{mm/rev}$
 $a_p=1.5\text{mm}$
Wet



AC4125K+GZ



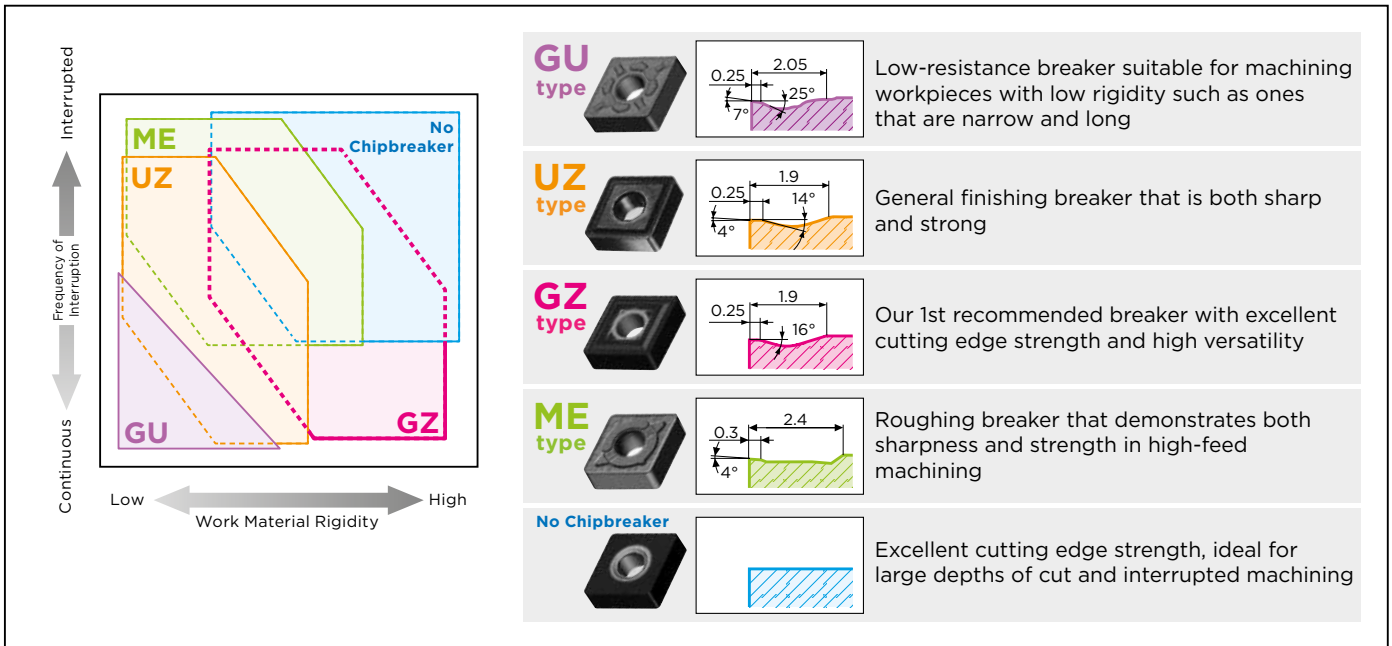
Conventional Tool (K20)



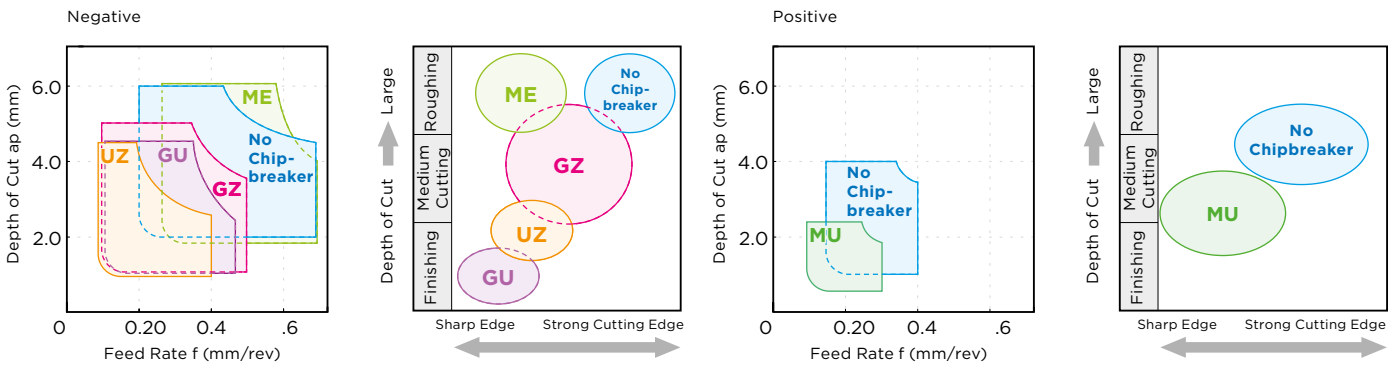
Comp's A (K20)

AC4010K/AC4015K/AC4125K

Chipbreaker Selection



Chipbreaker Application Range



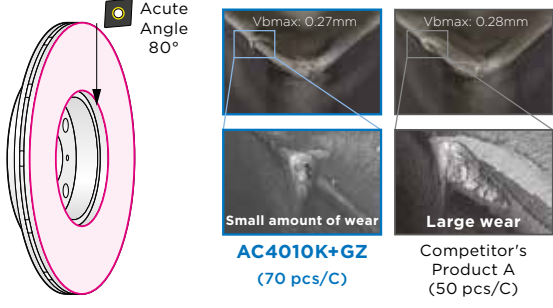
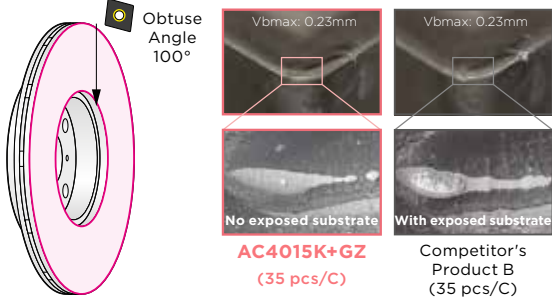

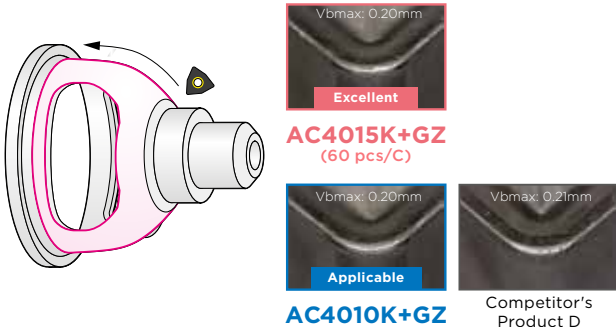
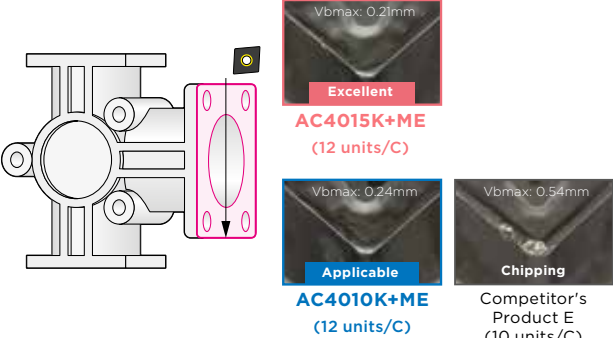
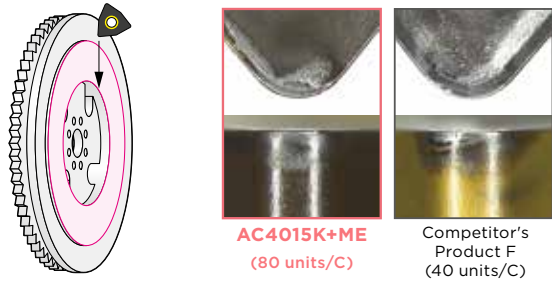
Recommended Cutting Conditions

(Red text indicates 1st recommendation)

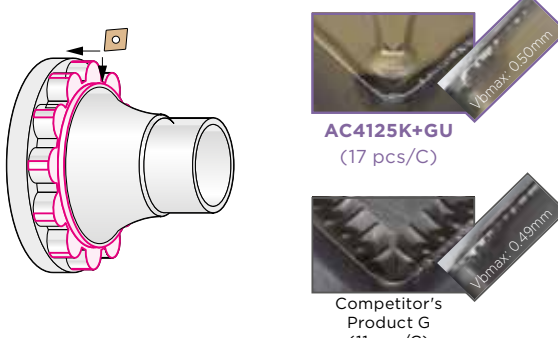
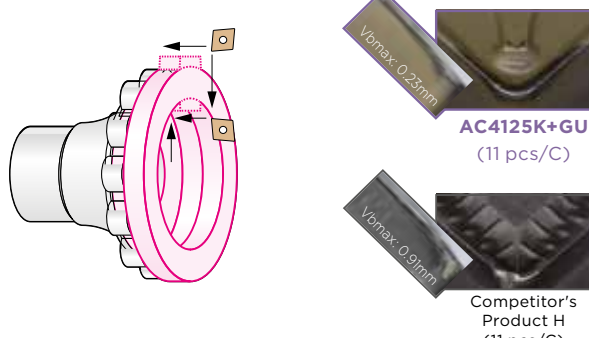
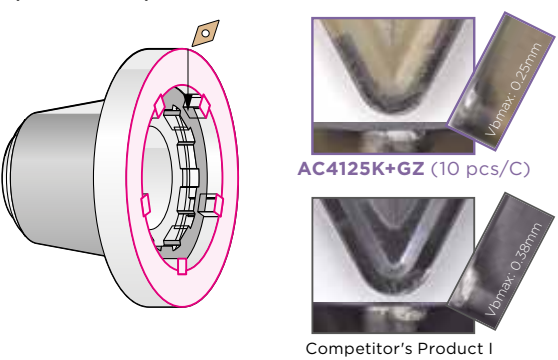
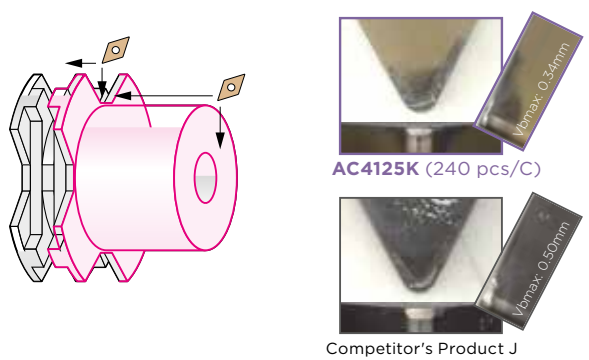
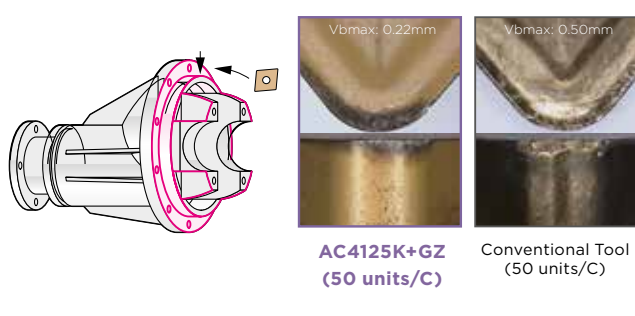
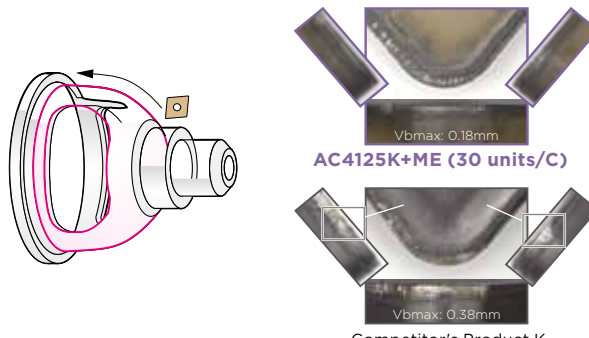
Work Material	Application	Grade	Cutting Conditions		Min. - Optimum - Max.
			Depth of Cut ap (mm)	Feed Rate f (mm/rev)	Cutting Speed (vc) (m/min)
Gray Cast Iron (example: FC250)	Continuous to General	AC4010K	0.5 - 2.0 - 6.0	0.10 - 0.25 - 0.40	200 - 400 - 700
	Interrupted	AC4015K	0.5 - 2.0 - 6.0	0.10 - 0.30 - 0.50	180 - 300 - 450
	Heavy Interrupted	AC4125K	0.5 - 2.0 - 6.0	0.10 - 0.30 - 0.60	150 - 200 - 300
Ductile Cast Iron (example: FCD450)	Continuous	AC4010K	0.5 - 2.0 - 6.0	0.10 - 0.25 - 0.40	180 - 300 - 450
	General to Interrupted	AC4015K	0.5 - 2.0 - 6.0	0.10 - 0.30 - 0.50	160 - 250 - 400
	Heavy Interrupted	AC4125K	0.5 - 2.0 - 6.0	0.10 - 0.30 - 0.60	120 - 170 - 250
High-strength Ductile Cast Iron (example: FCD700)	Continuous	AC4010K	0.5 - 2.0 - 6.0	0.10 - 0.25 - 0.40	160 - 250 - 400
	General to Interrupted	AC4015K	0.5 - 2.0 - 6.0	0.10 - 0.30 - 0.50	140 - 200 - 350
	Heavy Interrupted	AC4125K	0.5 - 2.0 - 6.0	0.10 - 0.30 - 0.60	80 - 150 - 220

AC4010K/AC4015K/AC4125K

Application Examples of AC4010K / AC4015K

<p>GG25 Brake Disc AC4010K K</p> <p>AC4010K achieved 1.4x longer tool life</p>  <p>Acute Angle 80°</p> <p>Vbmax: 0.27mm Small amount of wear AC4010K+GZ (70 pcs/C)</p> <p>Vbmax: 0.28mm Large wear Competitor's Product A (50 pcs/C)</p>	<p>GG25 Brake Disc AC4015K K</p> <p>AC4015K achieves longer tool life with minor wear</p>  <p>Obtuse Angle 100°</p> <p>Vbmax: 0.23mm No exposed substrate AC4015K+GZ (35 pcs/C)</p> <p>Vbmax: 0.23mm With exposed substrate Competitor's Product B (35 pcs/C)</p>
<p>Tool Used: CNMG120408N-GZ (AC4010K) Continuous Machining Cutting Conditions: vc=960m/min f=0.75mm/rev ap=2.0mm Wet</p>	<p>Tool Used: CNMG120408N-GZ (AC4015K) Continuous Machining Cutting Conditions: vc=960m/min f=0.75mm/rev ap=2.0mm Wet</p>
<p>GGG-80 Gear Ring External Turning AC4010K K</p> <p>Good wear resistance for machining high-strength ductile cast iron</p>  <p>Vbmax: 0.17mm Excellent AC4015K+ME</p> <p>Vbmax: 0.21mm Applicable AC4010K+ME</p> <p>Vbmax: 0.27mm Adhesion Competitor's Product C</p>	<p>GGG-60 Differential Case External Turning AC4010K K</p> <p>Excellent chipping resistance in heavy interrupted machining</p>  <p>Vbmax: 0.20mm Excellent AC4015K+GZ (60 pcs/C)</p> <p>Vbmax: 0.20mm Applicable AC4010K+GZ (45 pcs/C)</p> <p>Vbmax: 0.21mm Competitor's Product D (45 pcs/C)</p>
<p>Tool Used: WNMG080412N-ME (AC4010K/AC4015K) Continuous Machining Cutting Conditions: vc=120m/min f=0.25mm/rev ap=1.0-3.0mm Wet</p>	<p>Tool Used: WNMG080412N-GZ (AC4010K/AC4015K) Interrupted Machining Cutting Conditions: vc=250m/min f=0.30-0.45mm/rev ap=2.0mm Wet</p>
<p>GGG-50 Gear Case Facing AC4010K K</p> <p>Combined with ME type breaker for rough cutting for 1.2x longer tool life than competitor's products</p>  <p>Vbmax: 0.21mm Excellent AC4015K+ME (12 units/C)</p> <p>Vbmax: 0.24mm Applicable AC4010K+ME (12 units/C)</p> <p>Vbmax: 0.54mm Chipping Competitor's Product E (10 units/C)</p>	<p>GGG-40.3 Flywheel Facing AC4015K K</p> <p>Double tool life by high wear resistance</p>  <p>Vbmax: 0.24mm AC4015K+ME (80 units/C)</p> <p>Vbmax: 0.54mm Competitor's Product F (40 units/C)</p>
<p>Tool Used: CNMG120408N-ME (AC4010K/AC4015K) Interrupted Machining Cutting Conditions: vc=220m/min f=0.35mm/rev ap=1.5mm Wet</p>	<p>Tool Used: WNMA080408 (AC4015K) Continuous Machining Cutting Conditions: vc=230m/min f=0.3mm/rev ap=2.0mm Wet</p>

Application Examples of AC4125K New

<p>GGG-60 Differential Case External Turning/Facing AC4125K K</p> <p>1.5x tool life in high-strength ductile cast iron</p>  <p>AC4125K+GU (17 pcs/C)</p> <p>Competitor's Product G (11 pcs/C)</p>	<p>GGG-60 Differential Case External/Internal Turning/Facing AC4125K</p> <p>demonstrates excellent chipping resistance in heavy interrupted machining</p>  <p>AC4125K+GU (11 pcs/C)</p> <p>Competitor's Product H (11 pcs/C)</p>
<p>Tool Used: CNMG160412N-GU (AC4125K) Interrupted Machining Cutting Conditions: $vc=160\text{m/min}$ $f=0.20\text{-}0.45\text{mm/rev}$ $ap=2.5\text{-}3.0\text{mm}$ Wet</p>	<p>Tool Used: CNMG160412N-GU (AC4125K) Interrupted Machining Cutting Conditions: $vc=130\text{-}170\text{m/min}$ $f=0.20\text{-}0.45\text{mm/rev}$ $ap=2.5\text{-}3.0\text{mm}$ Wet</p>
<p>GGG-50 Wheel Hub Facing AC4125K K</p> <p>AC4125K achieves 1.3x longer tool life than competitors' products</p>  <p>AC4125K+GZ (10 pcs/C)</p> <p>Competitor's Product I (8 pcs/C)</p>	<p>GGG-40.3 Load Sheave External Turning/Roughing AC4125K K</p> <p>AC4125K achieves 1.2x longer tool life than competitors' products</p>  <p>AC4125K (240 pcs/C)</p> <p>Competitor's Product J (200 pcs/C)</p>
<p>Tool Used: DNMG150608N-GZ (AC4125K) Interrupted Machining Cutting Conditions: $vc=200\text{-}300\text{m/min}$ $f=0.15\text{mm/rev}$ $ap=0.5\text{mm}$ Wet</p>	<p>Tool Used: DNMA150408 (AC4125K) Interrupted Machining Cutting Conditions: $vc=200\text{m/min}$ $f=0.15\text{mm/rev}$ $ap=1.0\text{mm}$ Wet</p>
<p>GGG-40.3 Carrier Case External Turning/Facing AC4125K K</p> <p>achieves 2x longer tool life than competitors' products</p>  <p>AC4125K+GZ (50 units/C)</p> <p>Conventional Tool (50 units/C)</p>	<p>GGG-40.3 Differential Case External Interrupted Turning AC4125K K</p> <p>achieves 1.3x longer tool life than competitors' products</p>  <p>AC4125K+ME (30 units/C)</p> <p>Competitor's Product K (30 units/C)</p>
<p>Tool Used: CNMG120412N-GZ (AC4125K) Interrupted Machining Cutting Conditions: $vc=200\text{m/min}$ $f=0.3\text{mm/rev}$ $ap=2.5\text{mm}$ Wet</p>	<p>Tool Used: CNMG120412N-ME (AC4125K) Interrupted Machining Cutting Conditions: $vc=150\text{m/min}$ $f=0.2\text{-}0.3\text{mm/rev}$ $ap=2.0\text{mm}$ Wet</p>

80° Diamond Type

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius
	CNMG 120404 NLUW	●			12,7	4,76	5,16	0,4
	120408 NLUW	●						0,8
	120412 NLUW	●						1,2
	CNMG 090304 NGU	○	○		9,525	3,18	3,81	0,4
	090308 NGU	○	○					0,8
	CNMG 090412 NGU	○	○		9,525	4,76	3,81	1,2
	CNMG 120404 NGU	○	○					0,4
	120408 NGU	○	○					0,8
	120412 NGU	○	○	○	12,7	4,76	5,16	1,2
	120416 NGU	○	○					1,6
	CNMG 160608 NGU	○	○					0,8
	160612 NGU	●	●		15,875	6,35	6,35	1,2
	160616 NGU	○	○					1,6
CNMG 120408 NGUW	●	●		12,7	4,76	5,16	0,8	
120412 NGUW	●	●					1,2	
	CNMG 120408 NME	○	○	○	12,7	4,76	5,16	0,8
	120412 NME	○	○	○				1,2
	120416 NME	○	○	○				1,6
	CNMG 160608 NME	○	○	○	15,875	6,35	6,35	0,8
	160612 NME	○	○	○				1,2
	160616 NME	○	○	○				1,6
CNMG 190612 NME	○	○	○	19,05	6,35	7,94	1,2	
190616 NME	○	○	○				1,6	
190624 NME	○	○	○				2,4	
CNMG 250924 NME	○	○	○	25,4	9,52	9,12	2,4	
	CNMG 120404 NUZ	●	●	○	12,7	4,76	5,16	0,4
	120408 NUZ	●	●	●				0,8
	120412 NUZ	●	●	●				1,2
	120416 NUZ	○	○	○	15,875	6,35	6,35	1,6
	CNMG 160608 NUZ	●	●	●				0,8
	160612 NUZ	●	●	○				1,2
	160616 NUZ	●	●	○	15,875	6,35	6,35	1,6
	CNMG 190612 NUZ	○	○	○				1,2
	190616 NUZ	○	○	○	19,05	6,35	7,94	1,6
	190616 NUZ	○	○	○				1,2
	CNMG 090408 NGZ	○	○		9,525	4,76	3,81	0,8
	090412 NGZ	○	○					1,2
	CNMG 120404 NGZ	●	●	○	12,7	4,76	5,16	0,4
	120408 NGZ	●	●	●				0,8
	120412 NGZ	●	●	●				1,2
	120416 NGZ	○	○	○	15,875	6,35	6,35	1,6
	CNMG 160608 NGZ	○	○	○				0,8
	160612 NGZ	○	○	○				1,2
	160616 NGZ	○	○	○	15,875	6,35	6,35	1,6
	CNMG 190612 NGZ	○	○	○				1,2
190616 NGZ	○	○	○	19,05	6,35	7,94	1,6	
190616 NGZ	○	○	○				1,2	
	CNMA 120404	○	○	○	12,7	4,76	5,16	0,4
	120408	○	○	○				0,8
	120412	○	○	○				1,2
	120416	○	○	○	15,875	6,35	6,35	1,6
	CNMA 160608	○	○	○				0,8
	160612	○	○	○				1,2
	160616	○	○	○	15,875	6,35	6,35	1,6
	CNMA 190612	○	○	○				1,2
	190616	○	○	○	19,05	6,35	7,94	1,2
	190616	○	○	○				1,6

55° Diamond Type

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius
	DNMG 110404 NGU	○	○		9,525	4,76	3,81	0,4
	110408 NGU	○	○					0,8
	110412 NGU	○	○					1,2
	DNMG 150404 NGU	○	○	○	12,7	4,76	5,16	0,4
	150408 NGU	○	○	○				0,8
	150412 NGU	○	○	○				1,2
	150416 NGU	○	○	○	12,7	6,35	5,16	1,6
	DNMG 150604 NGU	○	○	○				0,4
	150608 NGU	○	○	○				0,8
	150612 NGU	○	○	○	12,7	6,35	5,16	1,2
150616 NGU	○	○	○	1,6				
	DNMG 150408 NME	○	○	○	12,7	4,76	5,16	0,8
	150412 NME	○	○	○				1,2
	150416 NME	○	○	○				1,6
	DNMG 150608 NME	○	○	○	12,7	6,35	5,16	0,8
150612 NME	○	○	○	1,2				
150616 NME	○	○	○	1,6				
	DNMG 150404 NUZ	○	○	○	12,7	4,76	5,16	0,4
	150408 NUZ	○	○	○				0,8
	150412 NUZ	○	○	○				1,2
	DNMG 150608 NUZ	○	○	○	12,7	6,35	5,16	0,8
150612 NUZ	○	○	○	1,2				
150616 NUZ	○	○	○	1,6				

● Euro stock ○ Japan stock

55° Diamond Type

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius
	DNMG 110408 NGZ	○	○	●	9,525	4,76	3,81	0,8
	110412 NGZ	○	○	○				1,2
	DNMG 150404 NGZ	○	○	○				0,4
	150408 NGZ	○	○	○	12,7	4,76	5,16	0,8
	150412 NGZ	○	○	○				1,2
	DNMG 150604 NGZ	○	○	○	12,7	6,35	5,16	0,4
	150608 NGZ	●	●	○				0,8
	150612 NGZ	○	○	○				1,2
	DNMA 150404	○	○	○	12,7	4,76	5,16	0,4
	150408	○	○	○				0,8
	150412	○	○	○				1,2
DNMA 150608	○	○	○	12,7	6,35	5,16	0,8	
150612	○	○	○				1,2	

Square Type

Shape	Cat. No.	Stock			Dimensions (mm)				
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius	
	SNMG 090304 NGU	○	○		9,525	3,18	3,81	0,4	
	090308 NGU	○	○					0,8	
	SNMG 120404 NGU	○	○		12,7	4,76	5,16	0,4	
	120408 NGU	○	○					0,8	
	120412 NGU	○	○					1,2	
	SNMG 150608 NGU	○	○		15,875	6,35	6,35	0,8	
150612 NGU	○	○		1,2					
150616 NGU	○	○		1,6					
	SNMG 120408 NME	○	○	○	12,7	4,76	5,16	0,8	
	120412 NME	○	○	○				1,2	
	120416 NME	○	○	○				1,6	
	SNMG 150608 NME	○	○		15,875	6,35	6,35	0,8	
150612 NME	○	○		1,2					
150616 NME	○	○		1,6					
SNMG 190612 NME	○	○		19,05	6,35	7,94	1,2		
190616 NME	○	○					1,6		
190624 NME	○	○					2,4		
SNMG 250924 NME	○	○		25,4	9,52	9,12	2,4		
	SNMG 120408 NUZ	○	○	○	12,7	4,76	5,16	0,8	
	120412 NUZ	○	○	○				1,2	
	120416 NUZ	●	○					1,6	
	SNMG 150612 NUZ	○	○		15,875	6,35	6,35	1,2	
150616 NUZ	○	○		1,6					
SNMG 190612 NUZ	○	○		19,05				6,38	7,94
190616 NUZ	○	○			1,6				
	SNMG 120408 NGZ	○	○	○	12,7	4,76	5,16	0,8	
	120412 NGZ	○	○	○				1,2	
	120416 NGZ	○	○	○				1,6	
	SNMG 150612 NGZ	○	○	○	15,875	6,35	6,35	1,2	
	150616 NGZ	○	○	○				1,6	
	SNMG 190612 NGZ	○	○	○				19,05	6,35
	190616 NGZ	○	○	○	1,6				
		SNMA 120404	○	○	○	12,7	4,76	5,16	0,4
		120408	○	○	○				0,8
		120412	○	○	○				1,2
120416		○	○	○	15,875	6,35	6,35	1,6	
120420		○	○	○				2,0	
SNMA 150612		○	○	○				15,875	6,35
150616		○	○	○	1,6				
SNMA 190612	○	○	○	19,05	6,35	7,94	1,2		
190616	○	○	○				1,6		

Triangular Type

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius
	TNMG 160404 NGU	○	○		9,525	4,76	3,81	0,4
	160408 NGU	○	○	○				0,8
	160412 NGU	○	○					1,2
	TNMG 220404 NGU	○	○		12,7	4,76	5,16	0,4
	220408 NGU	○	○					0,8
220412 NGU	○	○		1,2				
	TNMG 160408 NME	○	○	○	9,525	4,76	3,81	0,8
	160412 NME	○	○	○				1,2
	220408 NME	○	○					0,8
	TNMG 220412 NME	○	○		12,7	4,76	5,16	1,2
220416 NME	○	○		1,6				

△ Triangular Type

Shape	Cat. No.	Stock			Dimensions (mm)						
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius			
	TNMG 160404 NUZ	○	○	○	9,525	4,76	3,81	0,4			
	160408 NUZ	●	●	○				0,8			
	160412 NUZ	○	○	○				1,2			
	160416 NUZ	○	○	○				1,6			
	160420 NUZ	○	○	○				2,0			
TNMG 220408 NUZ	220408 NUZ	○	○	○	12,7	4,76	5,16	0,8			
	220412 NUZ	○	○	○				1,2			
	220416 NUZ	○	○	○				1,6			
	TNMG 160404 NGZ	○	○	○	9,525	4,76	3,81	0,4			
	160408 NGZ	●	●	○				0,8			
	160412 NGZ	○	○	○				1,2			
	TNMG 220408 NGZ	○	○	○				12,7	4,76	5,16	0,8
	220412 NGZ	○	○	○							1,2
220416 NGZ	○	○	○	1,6							
	TNMA 160404	○	○	○	9,525	4,76	3,81	0,4			
	160408	○	○	○				0,8			
	160412	○	○	○				1,2			
	160416	○	○	○				1,6			
	160420	○	○	○	2,0						
	TNMA 220408	○	○	○	12,7	4,76	5,16	0,8			
	220412	○	●	○				1,2			
220416	○	●	○	1,6							

□ Square Type (without Insert Hole)

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	SNMN 120408	○	○	○	12,7	4,76	-	0,8
	120412	○	○	○				1,2
	120416	○	○	○				1,6

△ Triangular Type (without Insert Hole)

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	TNMM 160408	○	○	○	9,525	4,76	-	0,8
	160412	○	○	○				1,2
	160416	○	○	○				1,6

● Euro stock ○ Japan stock

◇ 35° Diamond Type

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	VNMG 160404 NGU	○	○	○	9,525	4,76	3,81	0,4
	160408 NGU	○	○	○				0,8
	160412 NGU	○	○	○				1,2
	VNMG 160404 NUZ	○	○	○	9,525	4,76	3,81	0,4
	160408 NUZ	○	○	○				0,8
	160412 NUZ	○	○	○				1,2
	VNMG 160404 NGZ	○	○	○	9,525	4,76	3,81	0,4
	160408 NGZ	●	●	○				0,8
	160412 NGZ	●	○	○				1,2
	VNMA 160404	○	○	○	9,525	4,76	3,81	0,4
	160408	○	○	○				0,8
	160412	○	○	○				1,2

△ Trigon Type

Shape	Cat. No.	Stock			Dimensions (mm)			
		AC4010K	AC4015K	AC4125K	Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	WNMG 080408 NLUW	●	●	○	12,7	4,76	5,16	0,8
	080412 NLUW	●	○	○				1,2
	WNMG 060404 NGU	○	○	○	9,525	4,76	3,81	0,4
	060408 NGU	○	○	○				0,8
	060412 NGU	○	○	○				1,2
	WNMG 080404 NGU	○	○	○	12,7	4,76	5,16	0,4
	080408 NGU	○	○	○				0,8
	080412 NGU	○	○	○				1,2
WNMG 080408 NGUW	●	○	○	12,7	4,76	5,16	0,8	
	WNMG 060408 NME	○	○	○	9,525	4,76	3,81	0,8
	060412 NME	○	○	○				1,2
	WNMG 080408 NME	○	○	○	12,7	4,76	5,16	0,8
	080412 NME	○	○	○				1,2
080416 NME	○	○	○	1,6				
	WNMG 080404 NUZ	○	○	○	12,7	4,76	5,16	0,4
	080408 NUZ	○	○	○				0,8
	080412 NUZ	●	○	○				1,2
	WNMG 060408 NGZ	○	○	○	9,525	4,76	3,81	0,8
	060412 NGZ	○	○	○				1,2
	WNMG 080404 NGZ	○	○	○	12,7	4,76	5,16	0,4
080408 NGZ	○	○	○	0,8				
080412 NGZ	○	○	○	1,2				
	WNMA 080408	○	○	○	12,7	4,76	5,16	0,8
	080412	○	○	○				1,2
	080416	○	○	○				1,6

80° Diamond Type

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius
	7°	CCMT 09T304 NLB	●	●		9,525	3,97	4,4	0,4
		09T308 NLB	●	●					0,8
	7°	CCMT 060204 NSU	●	●		6,35	2,38	2,8	0,4
		CCMT 09T304 NSU	●	●		9,525	3,97	4,4	0,4
		09T308 NSU	●	●					0,8
		CCMT 120404 NSU	●	●		12,7	4,76	5,5	0,4
	7°	CCMT 120408 NSU	●	●					0,8
		CCMT 120412 NSK	●			12,7	4,76	5,5	1,2
	7°	CCMT 09T304 NMU	○	●	●	9,525	3,97	4,4	0,4
		09T308 NMU	○	●	●				0,8
	7°	CCMW 060204	○	○		6,35	2,38	2,8	0,4
		CCMW 09T304	○	○	○	9,525	3,97	4,4	0,4
		09T308	○	○	○				0,8
	11°	CPMT 080204 NMU	○	○	○	7,94	2,38	3,4	0,4
		080208 NMU	○	○	○				0,8
		CPMT 090304 NMU	○	○	○	9,525	3,18	4,4	0,4
	11°	CPMT 090308 NMU	○	○	○				0,8
		CPMW 080204	○	○		7,94	2,38	3,4	0,4
		CPMW 080208	○	○					0,8
	11°	CPMW 090304	○	○	○	9,525	3,18	4,4	0,4
		090308	○	○	○				0,8

55° Diamond Type

	7°	DCMT 070208 NSU	●	●		6,35	2,38	2,8	0,8
		DCMT 11T304 NSU	●	●		9,525	3,97	4,4	0,4
		11T308 NSU	●	●					0,8
	7°	DCMT 11T304 NMU	○	●	●	9,525	3,97	4,4	0,4
		11T308 NMU	○	●	●				0,8
	7°	DCMW 070204	○	○		6,35	2,38	2,8	0,4
		DCMW 070208	○	○					0,8
		DCMW 11T304	○	○	○	9,525	3,97	4,4	0,4
		11T308	○	○	○				0,8

Round Type

	7°	RCMX 1003M0NRP	○	○		10,0	3,18	3,6	-
		RCMX 1204M0NRP	○	○	○	12,0	4,76	4,2	-
		RCMX 1606M0NRP	○	○		16,0	6,35	5,2	-

Square Type

	7°	SCMT 09T308 NSU	●	●		9,525	3,97	4,4	0,8
		SCMT 120408 NSU	●			12,7	4,76	5,5	0,8
	7°	SCMT 09T308 NMU	○	○	○	9,525	3,97	4,4	0,8
		SCMT 120408 NMU	○	○	●	12,7	4,76	5,5	0,8
	7°	SCMW 09T308	○	○	○	9,525	3,97	4,4	0,8
		SCMW 120408	○	○	○				0,8
		SCMW 120412	○	○	○	12,7	4,76	5,5	1,2

Triangular Type

Shape	Relief Angle	Cat. No.	Stock			Dimensions (mm)			
			AC4010K	AC4015K	AC4125K	Inscribed Circle	Thickness	Screw Hole Ø	Nose Radius
	7°	TCMW 110204	○	○	○	6,35	2,38	2,8	0,4
		TCMW 110208	○	○	○				0,8
		TCMW 16T304	○	○	○	9,525	3,97	4,3	0,4
		TCMW 16T308	○	○	○				0,8
	7°	TCMT 110208 NSU	●	●		6,35	2,38	2,8	0,8
		TCMT 16T308 NSU	●	●		9,525	3,97	4,3	0,8
		TCMT 16T312	○	○					1,2
	7°	TCMT 16T312 NSK	●			9,525	3,97	4,3	1,2
	11°	TPMT 110304 NMU	○	○	○	6,35	3,18	3,4	0,4
		TPMT 110308 NMU	○	○	○				0,8
	11°	TPMT 160404 NMU	○	○	○	9,525	4,76	4,4	0,4
		TPMT 160408 NMU	○	○	○				0,8

35° Diamond Type

	5°	VBMT 160404 NSU	●	●		9,525	4,76	4,4	0,4
		VBMT 160408 NSU	●	●					0,8
	5°	VBMT 160412 NSK	●			9,525	4,76	4,4	1,2
	5°	VBMW 160404	○	○	○	9,525	4,76	4,4	0,4
		VBMW 160408	○	○	○				0,8
	7°	VCMT 160404 NSU	●			9,525	4,76	4,4	0,4

Square Type (without Insert Hole)

	11°	SPMN 090304	○	○	○	9,525	3,18	-	0,4
		SPMN 090308	○	○	○				0,8
		SPMN 120304	○	○	○	12,7	3,18	-	0,4
		SPMN 120308	○	○	○				0,8
	11°	SPMN 120312	○	○	○				1,2

Triangular Type (without Insert Hole)

	11°	TPMN 110304	○	○	○	6,35	3,18	-	0,4
		TPMN 110308	○	○	○				0,8
		TPMN 160304	○	○	○	9,525	3,18	-	0,4
		TPMN 160308	○	○	○				0,8
	11°	TPMN 160312	○	○	○				1,2

● Euro stock ○ Japan stock



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