SUMITOMO
CARBIDE - CBN - DIAMOND

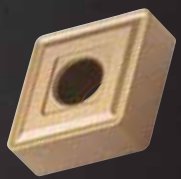
Coated Grades for Cast Iron

AC4010K/AC4015K/AC4125K New

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

New Grade for Interrupted Machining of Cast Iron

Introducing AC4125K



P M K N S H

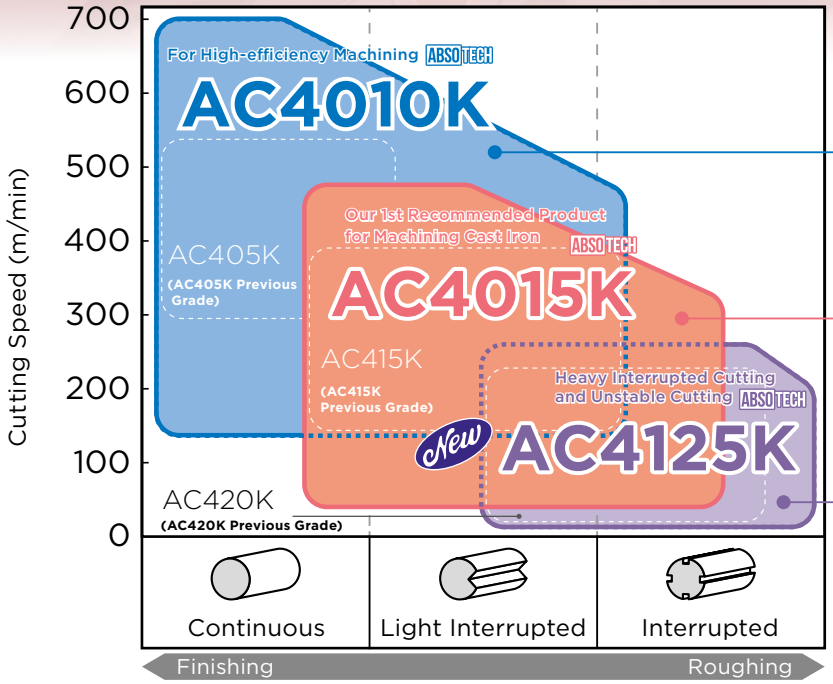
SUMITOMO ELECTRIC GROUP

Coated Grades for Cast Iron

AC4010K/AC4015K/AC4125K

VIDEO OF CUTTING

■ Application Range



AC4010K ABSOTECH

Our 1st recommended grade for machining gray cast iron.
Ultra-thick film coating enables ultra-high-speed machining at vc=700m/min.

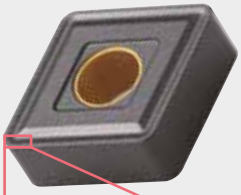
AC4015K ABSOTECH

Our 1st recommended grade for machining of ductile cast iron.
High-adhesion and high-strength coating enables stable and long tool life.

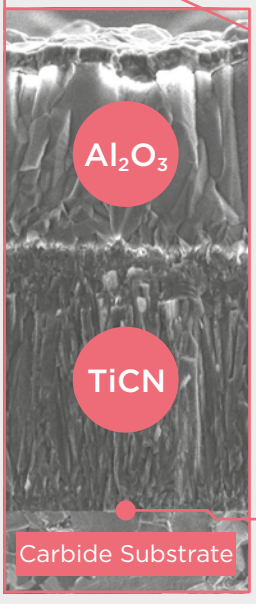
AC4125K New ABSOTECH

Our 1st recommended grade for interrupted machining of cast iron.Especially effective for stable long life in roughing of parts like differential cases and carriers.

■ 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

Image of Crystal Orientation

C-rich Ultra-fine TiCN Layer

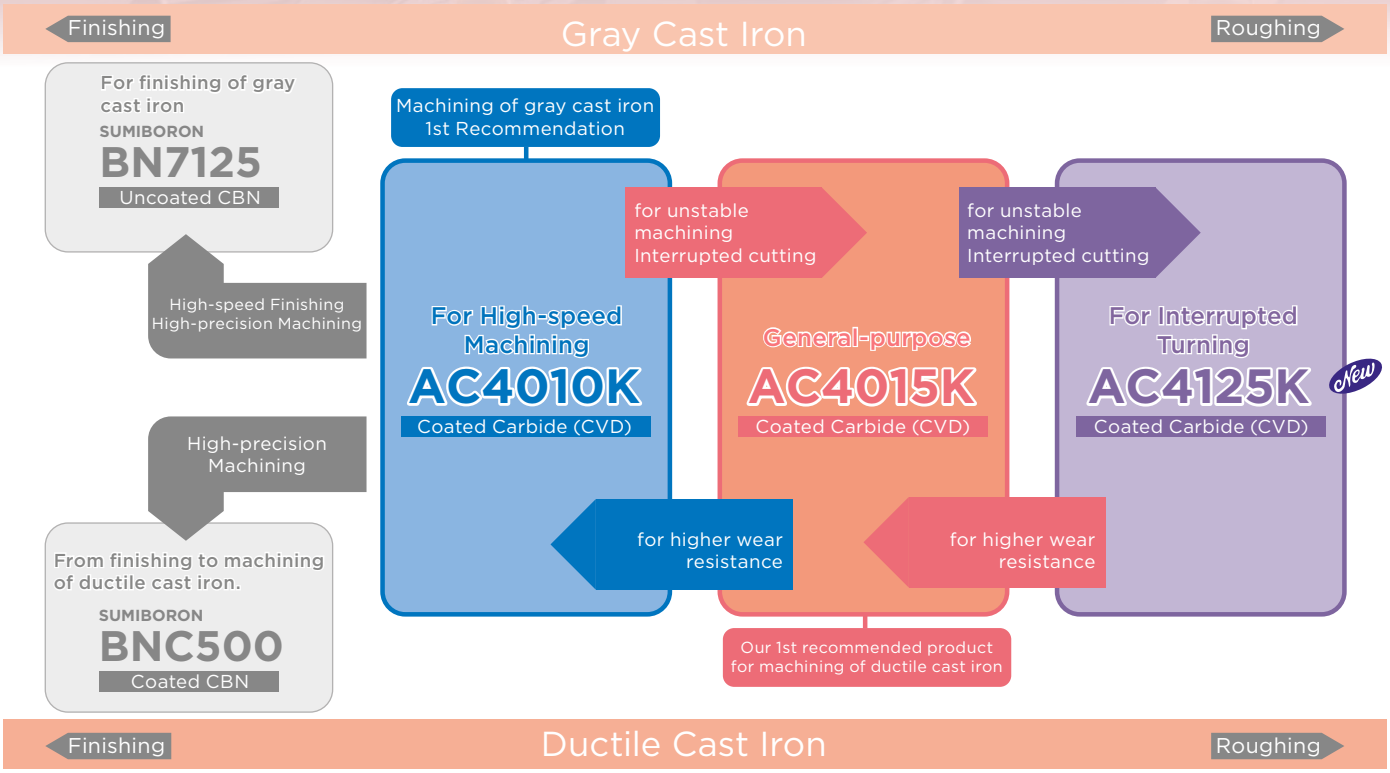
Flank wear resistance: Twice as much as conventional types

High Adhesion Technology

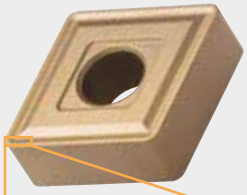
Smooth layer adhesion treatment (Rz0.15μm→0.07μm) greatly improves peel-off resistance

AC4010K/AC4015K/AC4125K

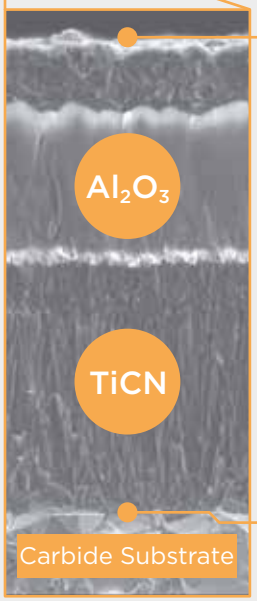
■ Applications of AC4000K Series (Example)



■ 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

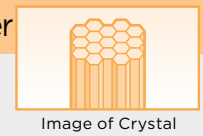


Image of Crystal Orientation

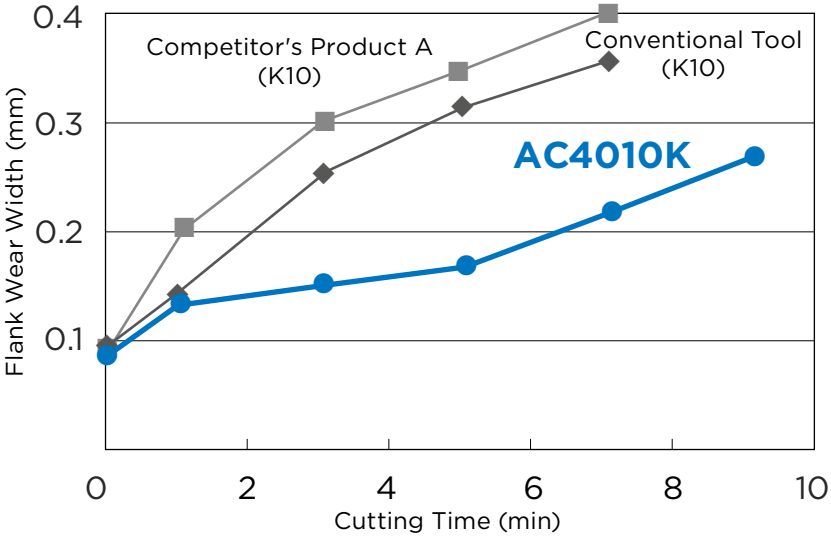
C-rich Ultra-fine TiCN Layer

Flank wear resistance: 1.5x as much as conventional types

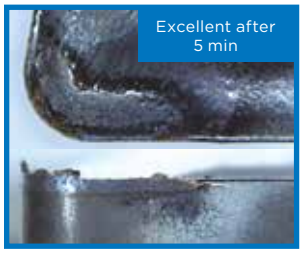
High Adhesion Technology

Smooth layer adhesion treatment (Rz0.15μm→0.07μm) greatly improves peel-off resistance

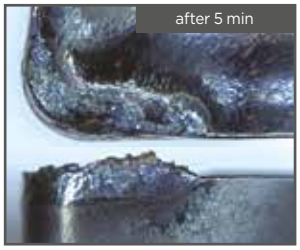
AC4010K/AC4015K/AC4125K



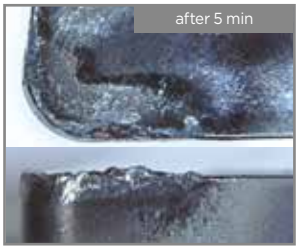
Work Material:	GG25 Continuous
Insert:	CNMG120408
Cutting Conditions:	vc=600m/min f=0.4mm/rev ap=2.0mm Dry



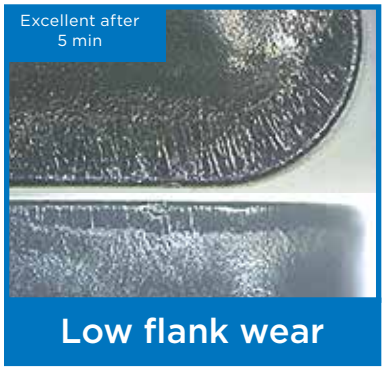
AC4010K+GZ



Conventional Tool (K10)



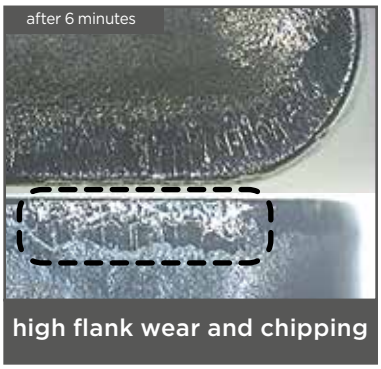
Comp's A (K10)



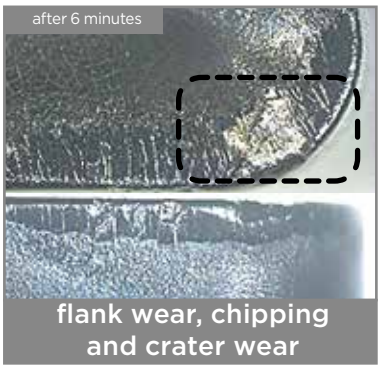
AC4010K+GZ

AC4015K+GZ

Work Material:	GG25 Interrupted
Insert:	CNMG120408
Cutting Conditions:	vc=400m/min f=0.3mm/rev ap=2.0mm Wet

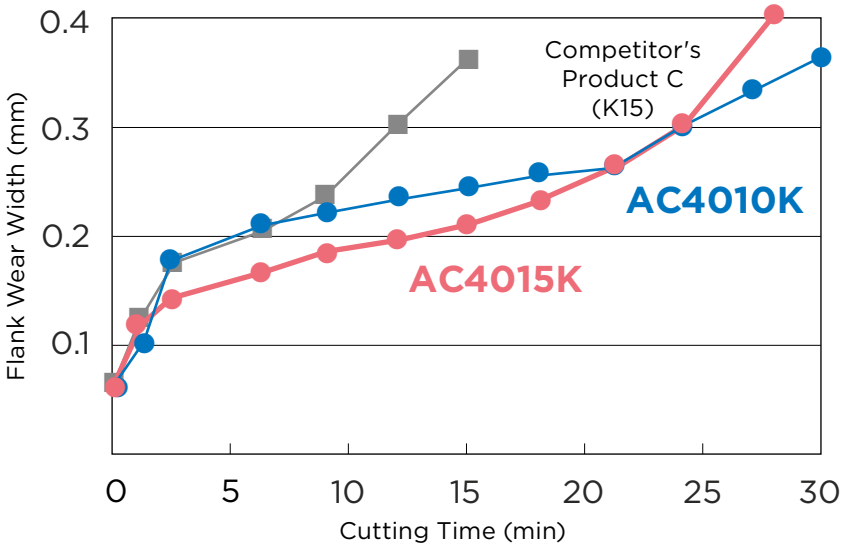


Conventional Tool (K10)

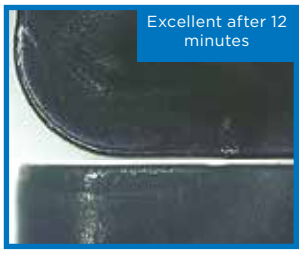


Comp's B (K10)

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

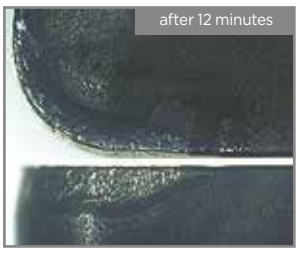


Work Material:	GGG70 Continuous
Insert:	CNMG120408
Cutting Conditions:	vc=140m/min f=0.3mm/rev ap=1.5mm Wet



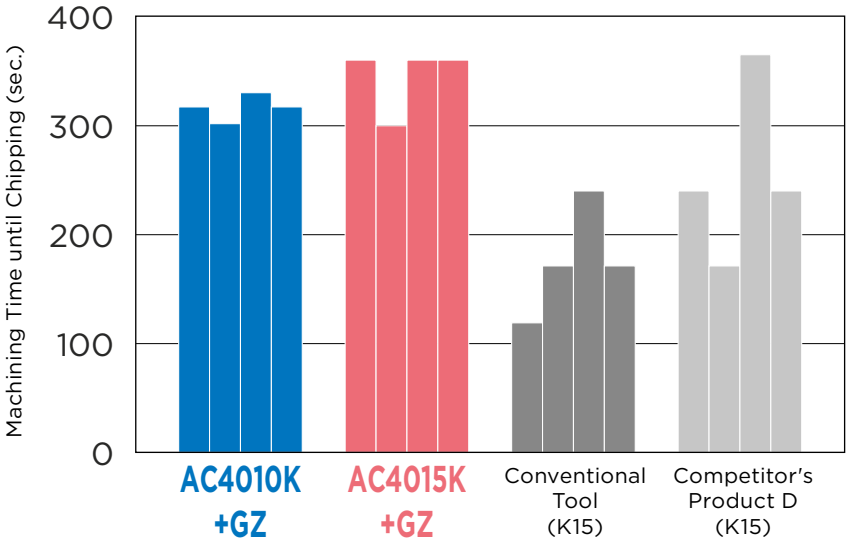
AC4010K+GZ

AC4015K+GZ

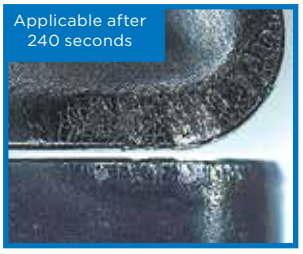


Comp´s C (K15)

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

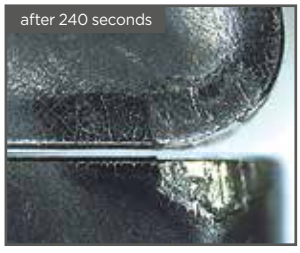


Work Material:	GGG-40.3 Interrupted
Insert:	CNMG12040
Cutting Conditions:	vc=450m/min f=0.3mm/rev ap=1.5mm Wet

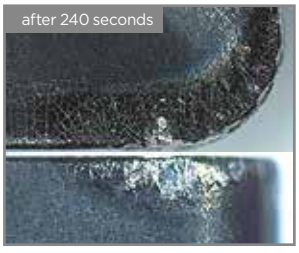


AC4010K

AC4015K

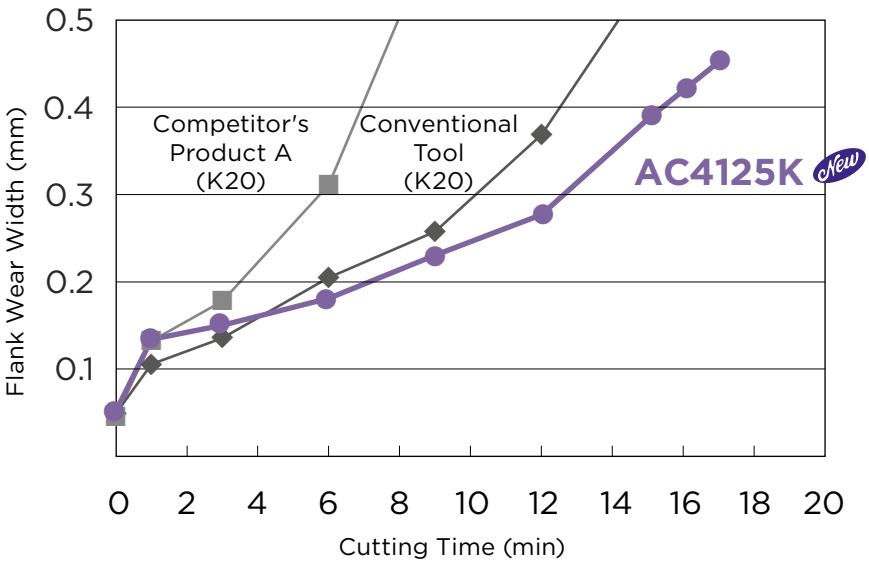


Conventional Tool (K15)

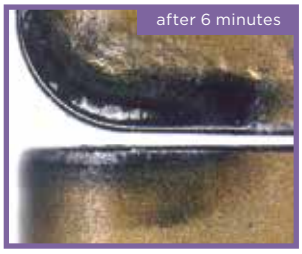


Comp's D (K15)

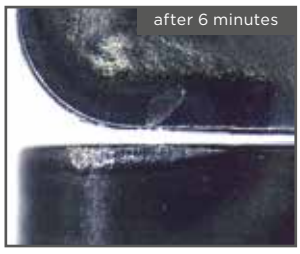
■ Wear Resistance of AC4125K (Continuous Ductile Cast Iron Cutting)



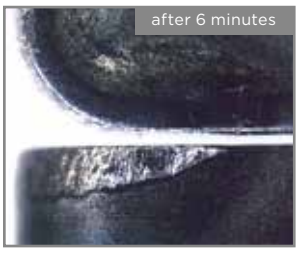
Work Material:	GGG70 Continuous
Insert:	CNMG120408
Cutting Conditions:	vc=140m/min f=0.3mm/rev ap=1.5mm Wet



New AC4125K+GZ

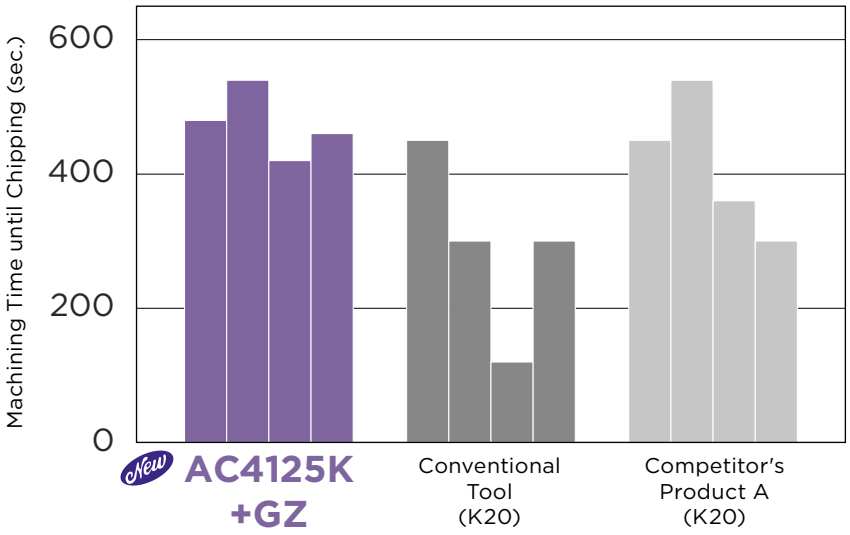


Conventional Tool (K20)

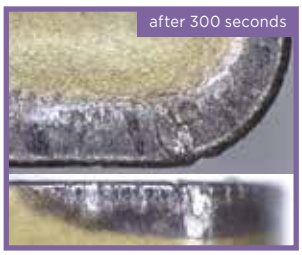


Comp´s A (K20)

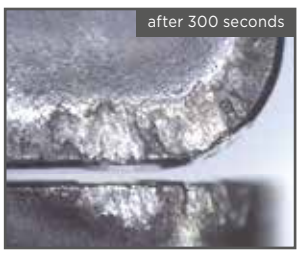
■ Chipping Resistance of AC4125K (Interrupted Ductile Cast Iron Cutting)



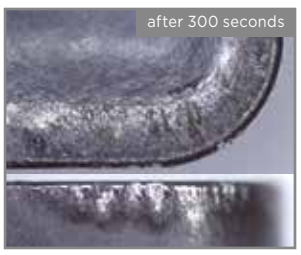
Work Material:	GGG-40.3 Interrupted
Insert:	CNMG120408
Cutting Conditions:	vc=450m/min f=0.3mm/rev ap=1.5mm Wet



New AC4125K+GZ

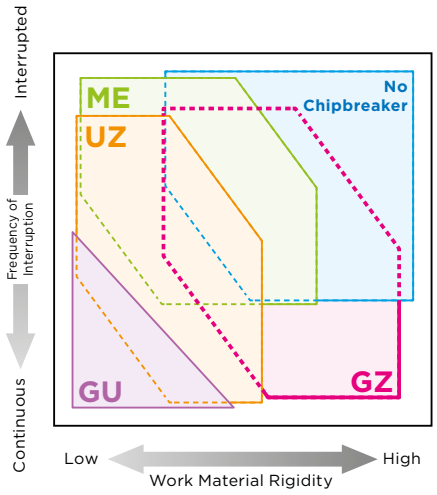


Conventional Tool (K20)

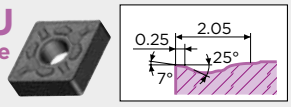


Comp´s A (K20)

Chipbreaker Selection

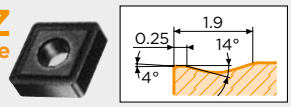


GU type



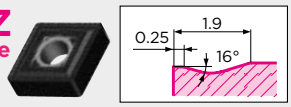
Low-resistance breaker suitable for machining workpieces with low rigidity such as ones that are narrow and long

UZ type



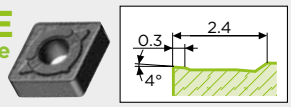
General finishing breaker that is both sharp and strong

GZ type



Our 1st recommended breaker with excellent cutting edge strength and high versatility

ME type

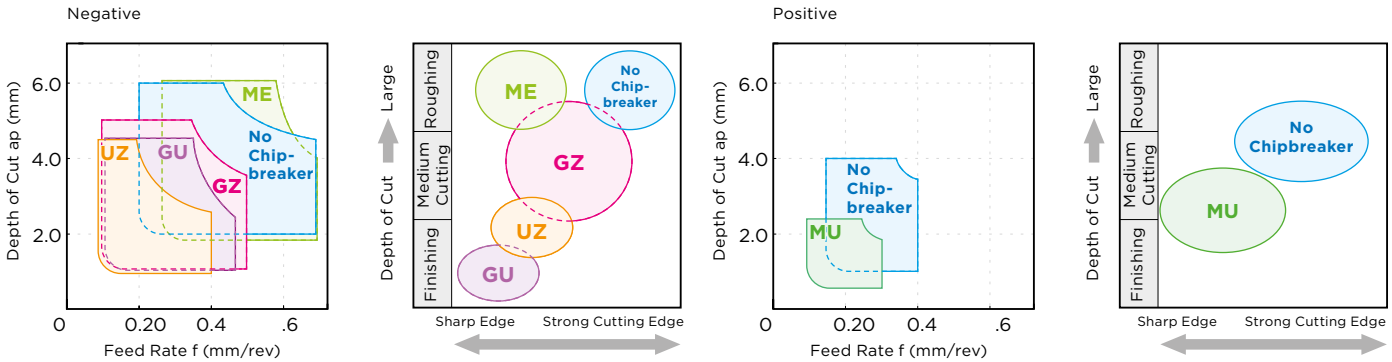


Roughing breaker that demonstrates both sharpness and strength in high-feed machining

No Chipbreaker

Excellent cutting edge strength, ideal for large depths of cut and interrupted machining

Chipbreaker Application Range



Recommended Cutting Conditions

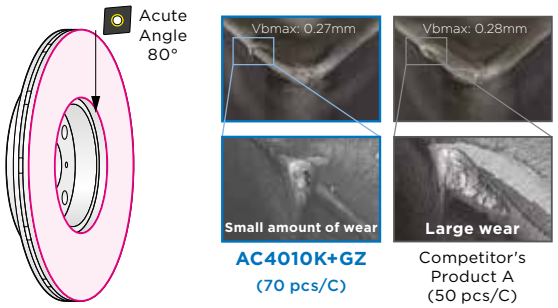
(Red text indicates 1st recommendation)

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

■ Application Examples of AC4010K / AC4015K

GG25 Brake Disc — AC4010K — K

AC4010K achieved 1.4x longer tool life



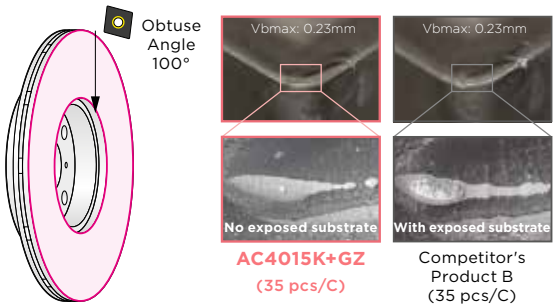
AC4010K+GZ (70 pcs/C)

Competitor's Product A (50 pcs/C)

Tool Used: CNMG120408N-GZ (AC4010K) Continuous Machining
Cutting Conditions: vc=960m/min f=0.75mm/rev ap=2.0mm
Wet

GG25 Brake Disc — AC4015K — K

AC4015K achieves longer tool life with minor wear



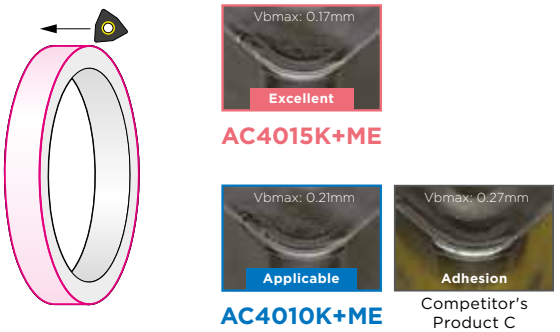
AC4015K+GZ (35 pcs/C)

Competitor's Product B (35 pcs/C)

Tool Used: CNMG120408N-GZ (AC4015K) Continuous Machining
Cutting Conditions: vc=960m/min f=0.75mm/rev ap=2.0mm
Wet

GGG-80 Gear Ring External Turning — AC4010K / AC4015K — K

Good wear resistance for machining high-strength ductile cast iron



AC4015K+ME

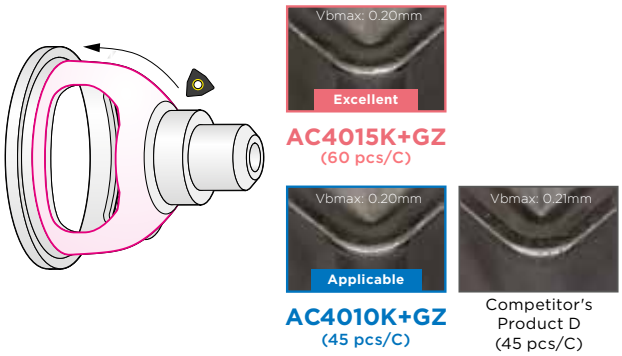
AC4010K+ME

Competitor's Product C

Tool Used: WNMG080412N-ME (AC4010K/AC4015K)
Continuous Machining
Cutting Conditions: vc=120m/min f=0.25mm/rev ap=1.0-3.0mm
Wet

GGG-60 Differential Case External Turning — AC4010K / AC4015K — K

Excellent chipping resistance in heavy interrupted machining



AC4015K+GZ (60 pcs/C)

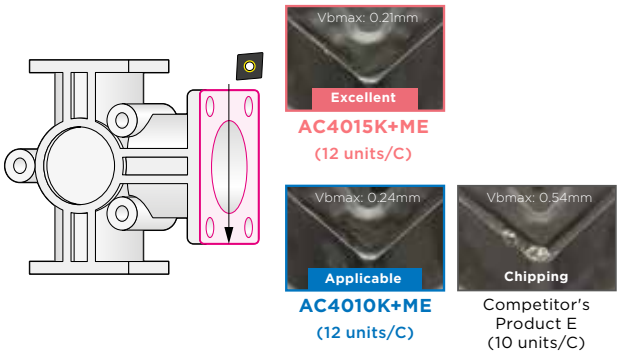
AC4010K+GZ (45 pcs/C)

Competitor's Product D (45 pcs/C)

Tool Used: WNMG080412N-GZ (AC4010K/AC4015K)
Interrupted Machining
Cutting Conditions: vc=250m/min f=0.30-0.45mm/rev ap=2.0mm
Wet

GGG-50 Gear Case Facing — AC4010K / AC4015K — K

Combined with ME type breaker for rough cutting for 1.2x longer tool life than competitor's products



AC4015K+ME (12 units/C)

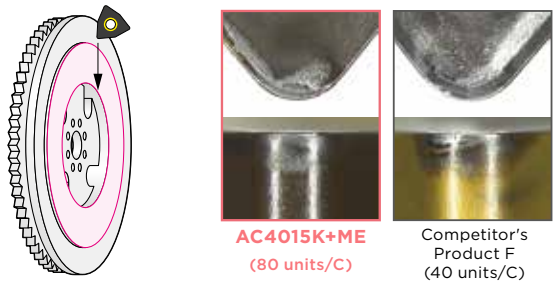
AC4010K+ME (12 units/C)

Competitor's Product E (10 units/C)

Tool Used: CNMG120408N-ME (AC4010K/AC4015K)
Interrupted Machining
Cutting Conditions: vc=220m/min f=0.35mm/rev ap=1.5mm
Wet

GGG-40.3 Flywheel Facing — AC4015K — K

Double tool life by high wear resistance



AC4015K+ME (80 units/C)

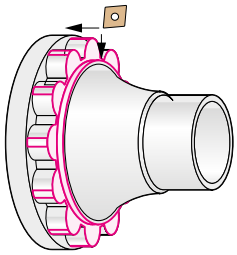
Competitor's Product F (40 units/C)

Tool Used: WNMA080408 (AC4015K) Continuous Machining
Cutting Conditions: vc=230m/min f=0.3mm/rev ap=2.0mm
Wet

■ Application Examples of AC4125K New

GGG-60 Differential Case External Turning/Facing AC4125K K

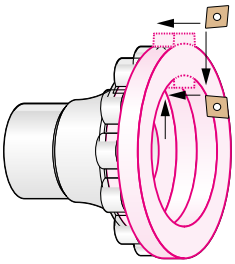
1.5x tool life in high-strength ductile cast iron

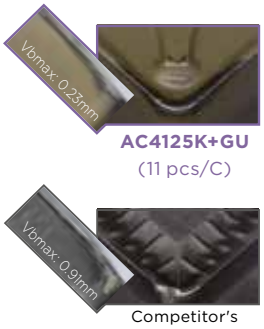


Tool Used: CNMG160412N-GU (AC4125K) Interrupted Machining
Cutting Conditions: vc=160m/min f=0.20-0.45mm/rev
ap=2.5-3.0mm Wet

GGG-60 Differential Case External/Internal Turning/Facing AC4125K

demonstrates excellent chipping resistance in heavy interrupted machining

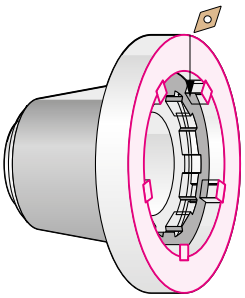


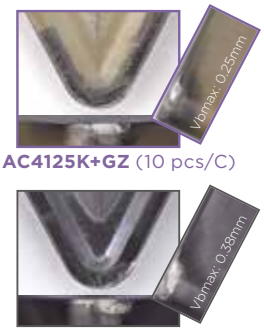


Tool Used: CNMG160412N-GU (AC4125K) Interrupted Machining
Cutting Conditions: vc=130-170m/min f=0.20-0.45mm/rev
ap=2.5-3.0mm Wet

GGG-50 Wheel Hub Facing AC4125K K

AC4125K achieves 1.3x longer tool life than competitors' products

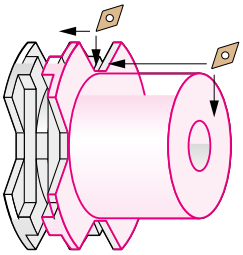


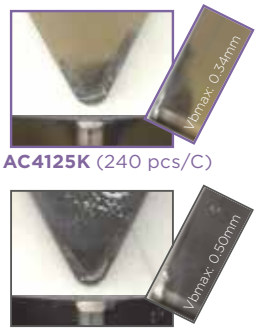


Tool Used: DNMG150608N-GZ (AC4125K) Interrupted Machining
Cutting Conditions: vc=200-300m/min f=0.15mm/rev ap=0.5mm
Wet

GGG-40.3 Load Sheave External Turning/Roughing AC4125K K

AC4125K achieves 1.2x longer tool life than competitors' products

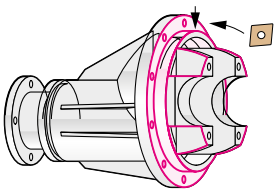


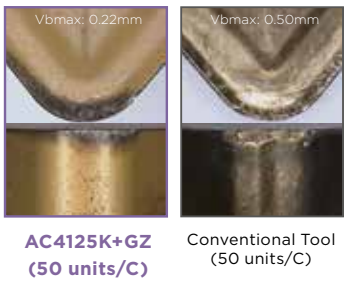


Tool Used: DNMA150408 (AC4125K) Interrupted Machining
Cutting Conditions: vc=200m/min f=0.15mm/rev ap=1.0mm
Wet

GGG-40.3 Carrier Case External Turning/Facing AC4125K K

achiesves 2x longer tool life than competitors` products

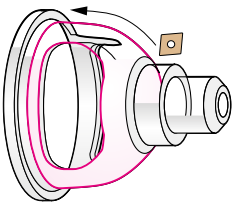


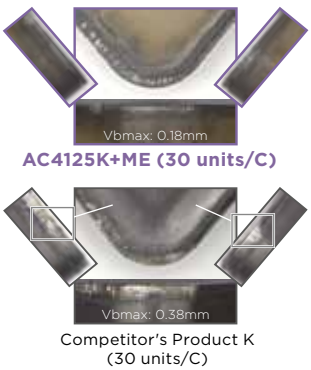


Tool Used: CNMG120412N-GZ (AC4125K) Interrupted Machining
Cutting Conditions: vc=200m/min f=0.3mm/rev ap=2.5mm
Wet

GGG-40.3 Differential Case External Interrupted Turning AC4125K K

achiesves 1.3x longer tool life than competitors` products





Tool Used: CNMG120412N-ME (AC4125K) Interrupted Machining
Cutting Conditions: vc=150m/min f=0.2-0.3mm/rev
ap=2.0mm Wet

80° Diamond Type

Shape	Cat. No.	Stock AC4010K	Stock AC4015K	Stock AC4125K	Dimensions (mm) Inscribed Circle	Thick-ness	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	❍	❍		12,7	4,76	5,16	0,4
	120408 NGU	❍	❍	❍				0,8
	120412 NGU	❍	❍	❍				1,2
	120416 NGU	❍	❍					1,6
	CNMG 160608 NGU	❍	❍		15,875	6,35	6,35	0,8
	160612 NGU	●	●					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	❍	❍	❍				1,6
	CNMG 160608 NUZ	●	●		15,875	6,35	6,35	0,8
	160612 NUZ	●	●	❍				1,2
	160616 NUZ	●	●	❍				1,6
	CNMG 190612 NUZ	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NUZ	❍	●	❍				1,6
	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	●	●	❍				1,6
	CNMG 160608 NGZ	❍	❍	❍	15,875	6,35	6,35	0,8
	160612 NGZ	●	●	●				1,2
	160616 NGZ	❍	●					1,6
	CNMG 190612 NGZ	❍	❍	❍	19,05	6,35	7,94	1,2
	190616 NGZ	❍	❍	❍				1,6
	CNMA 120404	❍	❍	❍	12,7	4,76	5,16	0,4
	120408	●	●	●				0,8
	120412	●	●	●				1,2
	120416	●	●	❍				1,6
	CNMA 160608	❍	❍		15,875	6,35	6,35	0,8
	160612	❍	●	●				1,2
	160616	●	●	❍				1,6
	CNMA 190612	❍	●	●	19,05	6,35	7,94	1,2
	190616	❍	❍	❍				1,6

55° Diamond Type

Shape	Cat. No.	Stock AC4010K	Stock AC4015K	Stock AC4125K	Dimensions (mm) Inscribed Circle	Thick-ness	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	❍	❍					1,6
	DNMG 150604 NGU	❍	❍		12,7	6,35	5,16	0,4
	150608 NGU	❍	❍					0,8
	150612 NGU	❍	❍					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

● Euro stock ❍ Japan stock

55° Diamond Type

Shape	Cat. No.	Stock AC4010K	Stock AC4015K	Stock AC4125K	Dimensions (mm) Inscribed Circle	Thick-ness	Screw Hole Ø	Nose Radius
	DNMG 110408 NGZ	❍	❍	●	9,525	4,76	3,81	0,8
	110412 NGZ	❍	❍					1,2
	DNMG 150404 NGZ	❍	❍	❍	12,7	4,76	5,16	0,4
	150408 NGZ	❍	❍	❍				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 AC4010K	Stock AC4015K	Stock AC4125K	Dimensions (mm) Inscribed Circle	Thick-ness	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
	120416 NGU	❍	❍					1,6
	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	1,2
	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	7,94	1,2
	190616 NGZ	❍	❍					1,6
	SNMA 120404	❍	❍		12,7	4,76	5,16	0,4
	120408	❍	❍	❍				0,8
	120412	●	●	❍				1,2
	120416	❍	●	❍				1,6
	120420	❍	❍	❍				2,0
	SNMA 150612	❍	❍		15,875	6,35	6,35	1,2
	150616	❍	❍					1,6
	SNMA 190612	❍	❍	❍	19,05	6,35	7,94	1,2
	190616	❍	❍	❍				1,6

Triangular Type

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

Stock Items

Triangular Type

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

Square Type (without Insert Hole)

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

Triangular Type (without Insert Hole)

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

● Euro stock ❍ Japan stock

35° Diamond Type

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

Trigon Type

Shape	Cat. No.	Stock AC4010K	Stock AC4015K	Stock AC4125K	Dimensions (mm) 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	❍	❍	❍				0,4
	060408 NGU	❍	❍		9,525	4,76	3,81	0,8
	060412 NGU	❍	❍					1,2
	WNMG 080404 NGU	❍	❍					0,4
	080408 NGU	❍	❍		12,7	4,76	5,16	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	❍	❍	❍				0,8
	080412 NME	❍	❍	❍	12,7	4,76	5,16	1,2
	080416 NME	❍	❍	❍				1,6
	WNMG 080404 NUZ	❍	❍	❍				0,4
	080408 NUZ	❍	●	❍	12,7	4,76	5,16	0,8
	080412 NUZ	●	❍	❍				1,2
	WNMG 060408 NGZ	❍	❍	●	9,525	4,76	3,81	0,8
	060412 NGZ	❍	❍					1,2
	WNMG 080404 NGZ	❍	❍	❍				0,4
	080408 NGZ	❍	●	●	12,7	4,76	5,16	0,8
	080412 NGZ	❍	●	●				1,2
	WNMA 080408	❍	●	❍				0,8
	080412	❍	●	❍	12,7	4,76	5,16	1,2
	080416	❍	●	❍				1,6

Stock Items

Positive Type Inserts

80° Diamond Type

Shape	Relief Angle	Cat. No.	Stock AC4010K	Stock AC4015K	Stock AC4125K	Dimensions (mm) Inscribed Circle	Thick-ness	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
		120408 NSU	●	●					0,8
	7°	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
		090308 NMU	❍	❍	❍				0,8
	11°	CPMW 080204	❍	❍		7,94	2,38	3,4	0,4
		080208	❍	❍					0,8
		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
		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	❍	❍	❍	12,7	4,76	5,5	0,8
		120412	❍	❍	❍				1,2

Triangular Type

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

35° Diamond Type

	5°	VBMT 160404 NSU	●	●		9,525	4,76	4,4	0,4
		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
		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
		090308	❍	❍	❍				0,8
		SPMN 120304	❍	❍	❍				0,4
		120308	❍	❍	❍	12,7	3,18	-	0,8
		120312	❍	❍					1,2

Triangular Type (without Insert Hole)

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

● Euro stock ❍ Japan stock

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