

ステンレス鋼旋削 コーティング材種
 Coating Grades For Stainless Steel Turning

AC6030M / AC6040M

AC6030M / AC6040M 第3版

ステンレス鋼旋削の新材種シリーズ登場!!

New Grades for Stainless Steel Turning are available



AC6030M

 汎用性のCVD新材種
 New CVD Grade for General Purpose


AC6040M

 安定性のPVD新材種
 New PVD Grade with Excellent Stability


ステンレス鋼旋削用 新ブレーカシリーズ完成!

A new series of chipbreakers for stainless steel turning has been completed.

New release!

 ポジティブ
 M級 **LB**型ブレーカ 拡充

M-Class Chipbreaker LB Type Expansion

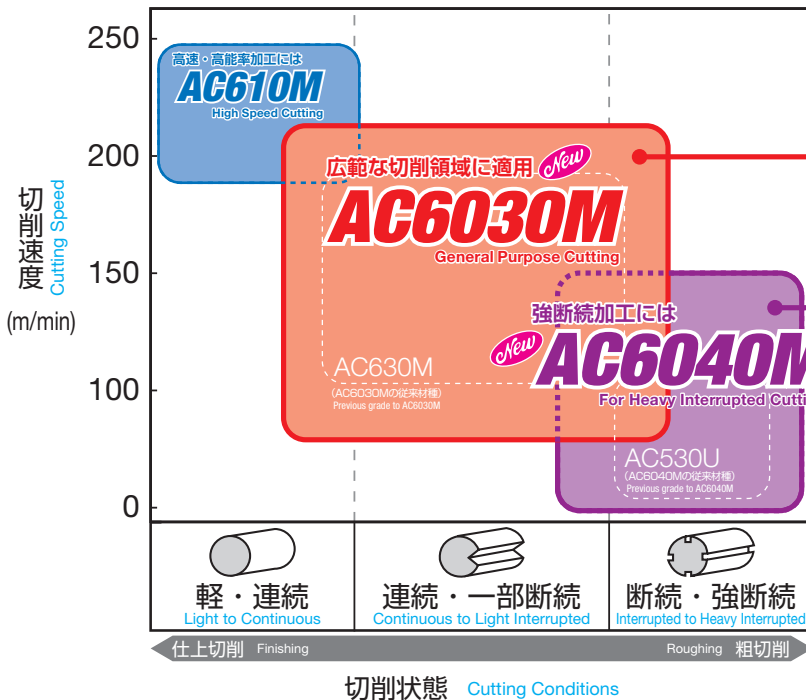
粗用EM型登場!

 材種とブレーカのラインアップ拡充で、
 ステンレス鋼加工における幅広いニーズに対応

 In addition to our EF and EG Types, we have newly added the EM Type for rough cutting!
 Our new lineup of grades and chipbreakers meets a wide range of needs in stainless steel machining.

EM型
P M K N S H

■ 適用領域 (ステンレス鋼) Application Range



● AC6030M *New*
新コーティング「Absotech Platinum」の採用により、ステンレス鋼加工での異常損傷の発生を大幅に低減し、安定長寿命を実現するステンレス鋼汎用加工の第一推奨材種
The first recommended grade for general machining of stainless steel that drastically reduces the occurrence of abnormal damage in stainless steel machining and achieves stable, long tool life thanks to a new coating, Absotech Platinum.

● AC6040M *New*
耐溶着性、耐剥離性に優れた新コーティング「Absotech Bronze」と耐欠損性を高めた専用超硬母材により、不安定加工領域での信頼性を大幅に向上させたステンレス鋼断続加工の第一推奨材種
The first recommended grade for interrupted cutting of stainless steel that drastically improves reliability in unstable machining thanks to the excellent adhesion and peel-off resistance of a new coating, Absotech Bronze, and the improved fracture resistance of an exclusive carbide substrate.

● AC610M
専用超硬母材と薄膜スーパーFFコートを採用し、ステンレス鋼加工での耐摩耗性を高め、高能率加工を実現したM10グレードの材種
A high efficiency M10 grade featuring improved wear resistance during stainless steel cutting. Employs special, ultra-hard substrate and thin Super FF Coat.

■ 特長 Feature

難削材とされるステンレス鋼の旋削加工に最適な新コーティング材種と新ブレーカシリーズが登場！
新開発のコーティング技術 **Absotech** により耐剥離性が著しく向上し、工具寿命が安定！
粗加工から仕上げ加工、高速加工から低速加工などの様々な条件下で、用途、条件、被削材種を問わず、ステンレス鋼加工での工具寿命延長を実現し、工具費低減が可能となります。

A new series of coating grades and chipbreakers, which is ideal for turning of hard-to-cut stainless steel!
Absotech, a newly developed coating technology, drastically improves peel-off resistance and provides stable tool life!
Extends tool life and thereby reduces tool costs in a wide range of applications, from roughing to finishing and from low-speed to high-speed machining of various types of stainless steel.

■ 推奨切削条件 Recommended cutting conditions

(赤字は第1推奨)
(Red text indicates first recommendations.)

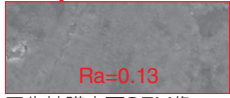
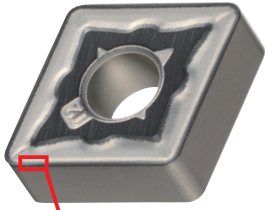
被削材 Work Material	切削領域 Cutting Range	ブレーカ Chipbreaker	材種 Grade	切削条件 Cutting Conditions		下限値 - 推奨値 - 上限値 Min. Optimum Max.
				切込み a_p (mm) Depth of Cut	送り量 f (mm/rev) Feed Rate	切削速度 v_c (m/min) Cutting Speed
Cr系 Cr-based フェライト系 Ferritic Materials	仕上げ Finishing	EF (SU)	AC610M	0.5-1.5-2.0	0.05-0.15-0.25	180-230-300
	中 Medium	EG・GU・EX	AC6030M	1.0-2.5-4.0	0.10-0.25-0.40	160-200-250
	粗 Rough	EM	AC6040M	1.5-3.5-6.0	0.20-0.35-0.60	140-170-200
マルテンサイト系 Martensitic Materials	仕上げ Finishing	EF (SU)	AC6030M	0.5-1.5-2.0	0.05-0.15-0.25	120-180-240
	中 Medium	EG・GU・EX	AC6030M	1.0-2.5-4.0	0.10-0.25-0.40	100-150-200
	粗 Rough	EM	AC6040M	1.5-3.5-6.0	0.20-0.35-0.60	80-130-180
Cr/Ni系 Cr/Ni-based オーステナイト系 Austenitic Materials	仕上げ Finishing	EF (SU)	AC6030M	0.5-1.5-2.0	0.05-0.15-0.25	120-180-240
	中 Medium	EG・GU・EX	AC6030M	1.0-2.5-4.0	0.10-0.25-0.40	100-150-200
	粗 Rough	EM	AC6040M	1.5-3.5-6.0	0.20-0.35-0.60	80-130-180
二相系 (オーステナイト・フェライト系) Two-Phase (Austenite/Ferrite) Materials	仕上げ Finishing	EF (SU)	AC6030M	0.5-1.5-2.0	0.05-0.15-0.25	100-145-180
	中 Medium	EG・GU・EX	AC6030M	1.0-2.5-4.0	0.10-0.25-0.40	80-120-160
	粗 Rough	EM	AC6040M	1.5-3.5-6.0	0.20-0.35-0.60	70-100-140
析出硬化系 Deposition Hardened Structures	仕上げ Finishing	EF (SU)	AC6030M	0.5-1.5-2.0	0.05-0.15-0.25	90-115-140
	中 Medium	EG・GU・EX	AC6030M	1.0-2.5-4.0	0.10-0.25-0.40	70- 90-130
	粗 Rough	EM	AC6040M	1.5-3.5-6.0	0.20-0.35-0.60	50- 80-120

ご注意 Note 青文字の数值は2015-2016年総合カタログ記載内容より変更となっております。
The values in blue have been changed from those in the 2015-2016 General Catalog.

AC6030M/AC6040Mの特長 Feature of AC6030M/AC6040M

汎用材種

Grade for General Machining



Ra=0.13

刃先被膜表面SEM像
Surface of Edge Coating: SEM image

AC6030M *New*

コーティング膜強度の向上により、従来コーティング膜対比2倍以上の耐チップング性を実現
表面平滑化により耐溶着性を大幅に向上し、異常損傷の発生を低減
独自外観色調により、優れたコーナー視認性を実現

Achieves over twice the chipping resistance of conventional coatings thanks to the improved coating strength

Drastically improves the adhesion resistance and reduces the occurrence of abnormal damage thanks to excellent surface smoothness

Improves the corner visibility with a unique color

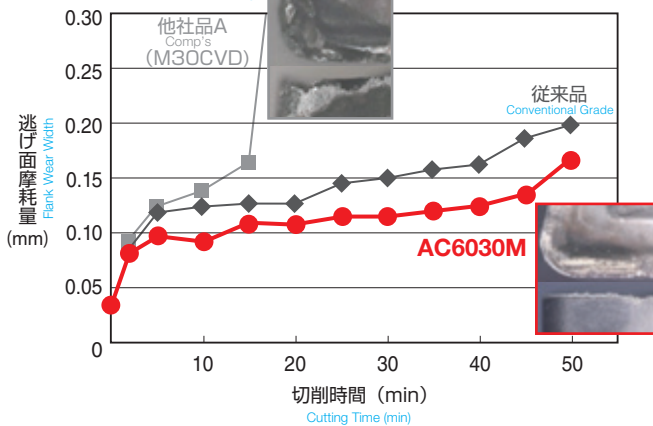
新CVDコーティング Absotech Platinum

New CVD Coating Absotech Platinum

新開発の応力制御技術と表面平滑化処理(特許技術)を採用することで、耐チップング性と耐溶着性を大幅に向上。

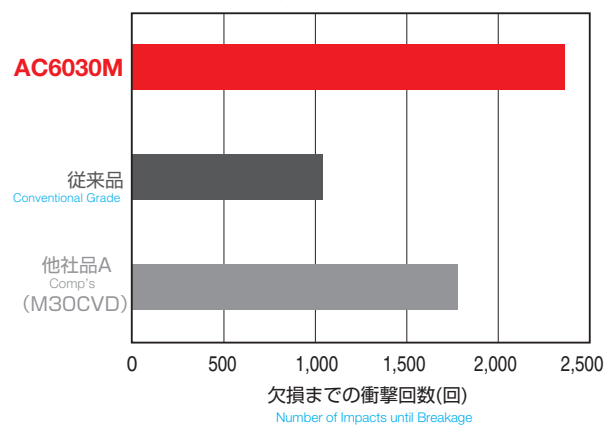
Drastically improved chipping resistance and adhesion resistance thanks to newly developed stress control techniques and surface smoothness treatment (patented technology).

●連続切削 Continuous Cutting



被削材 Work Material : SUS316 チップ Insert : CNMG120408
切削条件 Cutting Conditions : $v_c=200\text{m/min}$ $f=0.2\text{mm/rev}$ $a_p=2.0\text{mm}$ Wet

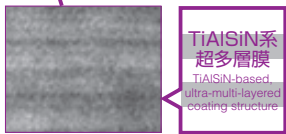
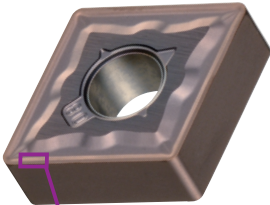
●断続切削 Interrupted Cutting



被削材 Work Material : SUS316 チップ Insert : CNMG120408
切削条件 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.10\text{mm/rev}$ $a_p=1.0\text{mm}$ Wet

断続加工用材種

Grade for Heavy Interrupted Cutting



TiAlSiN系
超多層膜
TiAlSiN-based
ultra-multi-layered
coating structure

10nm

刃先被膜断面TEM像
Cross Section of Edge Coating: TEM image

AC6040M *New*

新組成のTiAlSiN系超多層構造で優れた耐摩耗性・耐酸化性を実現

超硬母材とコーティング膜との界面制御技術の改良により、コーティング膜の耐剥離性を大幅に向上
ステンレス鋼の加工においては、従来比2倍以上の耐欠損性を実現

Achieves excellent wear and oxidation resistance thanks to the new composition's TiAlSiN-based, ultra-multi-layered coating structure

Drastically improves the peel-off resistance of coating by improving the boundary control technology between carbide substrate and coating

Compared to conventional grades, achieves over twice the fracture resistance in stainless steel machining

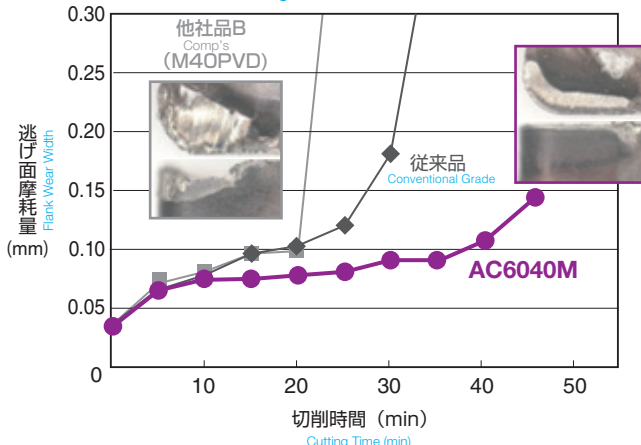
新PVDコーティング Absotech Bronze

New PVD Coating Absotech Bronze

スーパーZXコートに適用している当社独自の超多層薄膜構造を継承するとともに、耐熱性に優れた新組成の膜質を採用、更に超硬母材と膜の密着力を改良することで刃先の安定性を向上。

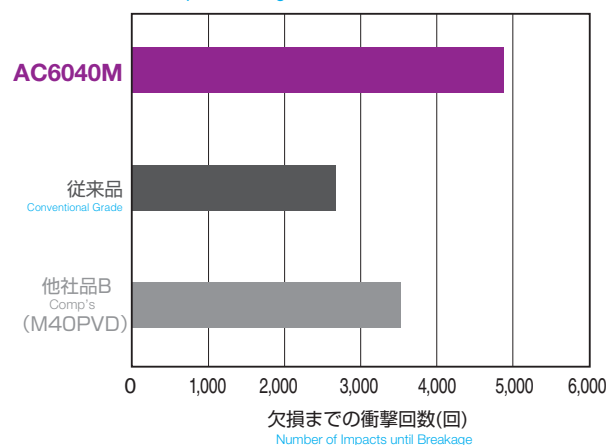
Improves the stability of the cutting edge by succeeding our unique ultra-multi-layered coating structure, which is applied to Super ZX Coating, and by employing highly heat-resistant coating of new composition, as well as improving the adhesion strength between carbide substrate and coating

●連続切削 Continuous Cutting



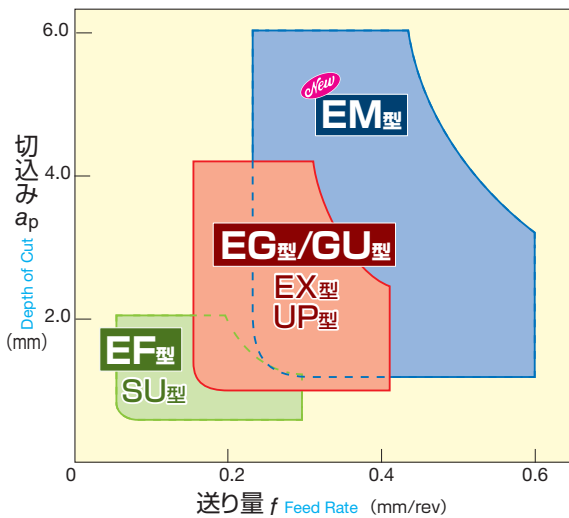
被削材 Work Material : SUS316 チップ Insert : CNMG120408
切削条件 Cutting Conditions : $v_c=150\text{m/min}$ $f=0.2\text{mm/rev}$ $a_p=2.0\text{mm}$ Wet

●断続切削 Interrupted Cutting



被削材 Work Material : SUS316 チップ Insert : CNMG120408
切削条件 Cutting Conditions : $v_c=230\text{m/min}$ $f=0.23\text{mm/rev}$ $a_p=0.8\text{mm}$ Dry

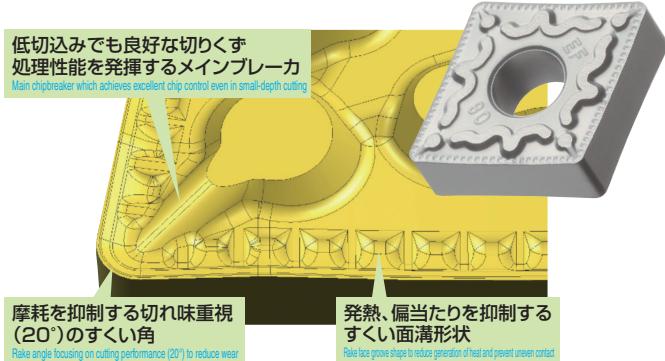
■ チップブレイカ適用領域 Chipbreaker Application Range



- ・ステンレス鋼加工用ブレイカシリーズとして仕上げ切削用EF型、中切削用EG型に加え、粗切削用EM型をシリーズ化
- ・EM型は刃先強度、EG型は刃先強度と切りくず処理性能、EF型は切りくず処理性能を向上させることで、ステンレス鋼の旋削加工において優れた安定性を実現
- ・In addition to the EF Type for finishing and the EG Type for medium cutting, the EM Type for rough cutting has been added to the chipbreaker series for stainless steel machining.
- ・To ensure excellent stability in stainless steel turning applications, the EM type offers cutting edge strength, the EG type both cutting edge strength and chip control capabilities, and the EF type further improved chip control capabilities.

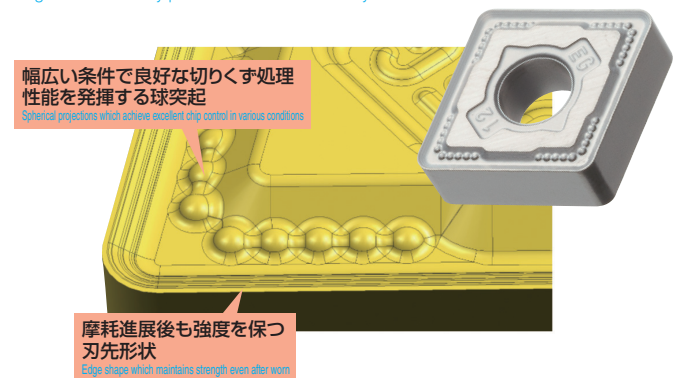
仕上げ加工用 EF型ブレイカ
EF Type Chipbreaker for Finishing

- 仕上げ加工領域において切りくずカール径を抑制し、非常に優れた切りくず処理性能を発揮
- ・Reduces chip curl diameters and thereby achieves excellent chip control in the finishing region.

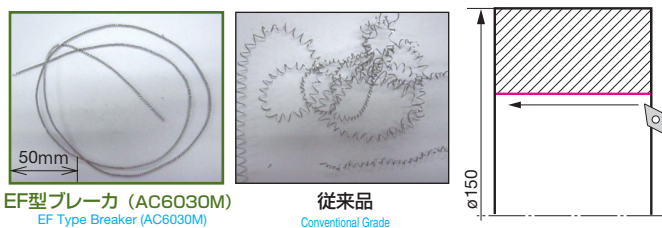


中切削加工用 EG型ブレイカ
EG Type Chipbreaker for Medium Cutting

- 中切削加工領域において優れた耐摩耗性と切りくず処理性能を両立。高い汎用性を発揮
- ・Achieves excellent wear resistance and chip control in the general to rough machining regions and thereby provides excellent versatility.



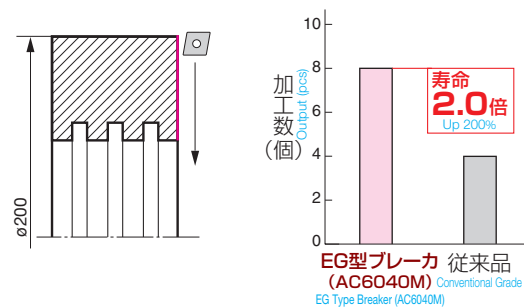
■ 使用実例 Application Example



切りくず処理を改善、ワーク仕上げ面の傷を抑制
Improves chip control and reduces scratches on finished surfaces.

被削材 Work Material: SUS304 カバー部品 Cover Component
チップ Insert: DNMG150408 (AC6030M)
切削条件 Cutting Conditions: $v_c=55\text{m/min}$ $f=0.125\text{mm/rev}$ $a_p=0.3\text{mm}$ Wet

■ 使用実例 Application Example



逃げ面摩耗の抑制・優れた切りくず処理性能を発揮
Reduces flank wear and achieves excellent chip control.

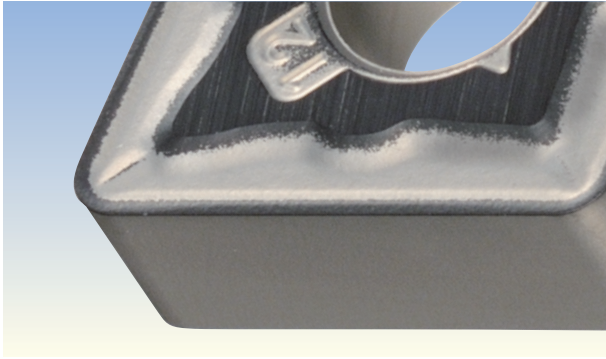
被削材 Work Material: SCS13A カップリング部品 Coupling Component
チップ Insert: CNMG120408 (AC6040M)
切削条件 Cutting Conditions: $v_c=70\sim 180\text{m/min}$ $f=0.14\text{mm/rev}$ $a_p=2.5\text{mm}$ Wet

^{New}粗切削用 EM型ブレイカ
EM Type Chipbreaker for Rough Cutting

■ 特長 Feature

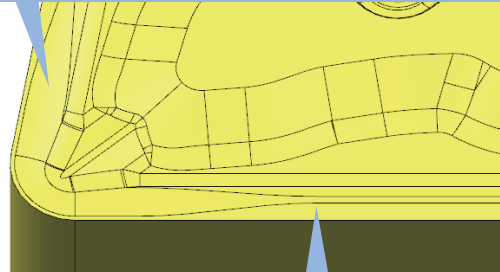
- 優れた耐欠損性と耐クレータ摩耗性を両立し
抜群の安定加工を実現

Achieves excellent fracture and crater resistance and ensures extremely stable machining



刃先強度を保持したまま、クレータ摩耗を抑制する
大Rすくい面形状

Large radius rake face design that reduces crater wear while maintaining the cutting edge strength



境界損傷を抑制する変化点のない切れ刃稜線

Cutting edge ridge design with no changing points for reduced boundary damage

損傷の改善 Reduction of Damage

	境界損傷の改善 Reduction of Boundary Damage		クレータ摩耗の改善 Reduction of Crater Wear	
	切れ刃部形状 Cutting Edge	境界摩耗比較 Boundary Wear Comparison	断面形状 Cross Section	すくい面摩耗比較 Crater Wear Comparison
従来品 Conventional Tool				
EM型 EM Type				
	切れ刃稜線部の変化点がないため境界部の損傷が抑制される The cutting edge has no changing points, so boundary damage is reduced.		大Rにより切りくずがすくい面をスムーズに流れ、クレータ摩耗を抑制 Thanks to a large radius rake face design, chips are smoothly evacuated and crater wear is reduced.	

■ 使用実例 Application Example

切れ刃外欠損を抑制し、安定加工を実現
Reduces breakage out of the cutting edge and ensures stable machining.

従来品 Conventional Grade

EM型ブレイカ (AC6030M)
EM Type Breaker (AC6030M)

クレータ摩耗を抑制し長寿命を実現
Reduces crater wear and provides long tool life.

加工数 (個)
Output (pcs)

EM型ブレイカ (AC6030M)	300
従来品 (AC6030M)	150

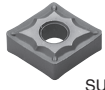


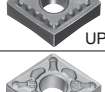

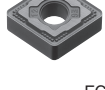
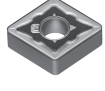
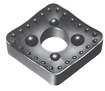
寿命2倍
Up 200%

被削材 Work Material : SUS316 フランジ部品 Flange Component
チップ Insert : SNMG190616 (AC6030M)
切削条件 Cutting Conditions : $v_c=70\text{m/min}$ $f=0.5\text{mm/rev}$ $a_p=3.0\sim 8.0\text{mm}$ Wet


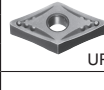
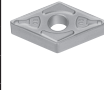
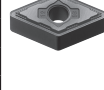

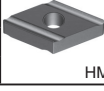
被削材 Work Material : SUS304 /バルブ部品 Valve Component
チップ Insert : SNMG120408 (AC6030M)
切削条件 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.32\text{mm/rev}$ $a_p=2.0\sim 2.5\text{mm}$ Wet

ネガティブチップ Negative Insert

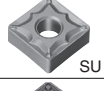

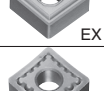
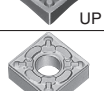

◇ ネガティブ80°菱形 Negative 80°Diamond Type

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	CNMG120402N-SU	●	●	12.7	4.76	5.16	0.2
	120404N-SU	●	●				0.4
	120408N-SU	●	●				0.8
	120412N-SU	●	●				1.2
	CNMG120404N-EF	●	●	12.7	4.76	5.16	0.4
	120408N-EF	●	●				0.8
	120412N-EF	●	●				1.2
	CNMG120404N-EX	●	●	12.7	4.76	5.16	0.4
	120408N-EX	●	●				0.8
	120412N-EX	●	●				1.2
	CNMG120404N-UP	●	●	12.7	4.76	5.16	0.4
	120408N-UP	●	●				0.8
	120412N-UP	●	●				1.2
	CNMG120404N-GU	●	●	12.7	4.76	5.16	0.4
	120408N-GU	●	●				0.8
	120412N-GU	●	●				1.2
	CNMG120404N-EG	●	●	12.7	4.76	5.16	0.4
	120408N-EG	●	●				0.8
	120412N-EG	●	●				1.2
	CNMG160612N-EG	●	●	15.875	6.35	6.35	1.2
	CNMG190612N-EG	●	●	19.05	6.35	7.94	1.2
	190616N-EG	●	●				1.6
		CNMG120408N-EM	●	●	12.7	4.76	5.16
120412N-EM		●	●	1.2			
120416N-EM		●	●	1.6			
CNMG160612N-EM		●	●	15.875	6.35	6.35	1.2
160616N-EM		●	●	19.05	6.35	7.94	1.6
CNMG190612N-EM		●	●				1.2
190616N-EM		●	●				1.6
		CNMM120408N-MP	●	●	12.7	4.76	5.16
	120412N-MP	●	●	1.2			
	120416N-MP	●	●	1.6			
	CNMM190608N-MP	●	●	19.05	6.35	7.94	0.8
	190612N-MP	●	●				1.2
	190616N-MP	●	●				1.6
	190624N-MP	●	●				2.4

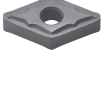

◇ ネガティブ55°菱形(つづき) Negative 55°Diamond Type (Continued)

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions						
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius			
	DNMG150404N-EX	●	●	12.7	4.76	5.16	0.4			
	150408N-EX	●	●				0.8			
	150412N-EX	●	●				1.2			
	DNMG150604N-EX	●	●				12.7	6.35	5.16	0.4
	150608N-EX	●	●							0.8
	150612N-EX	●	●	1.2						
	DNMG150404N-UP	●	●	12.7	4.76	5.16	0.4			
	150408N-UP	●	●				0.8			
150412N-UP	●	●	1.2							
	DNMG110404N-GU	●	●	9.525	4.76	3.81	0.4			
	110408N-GU	●	●				0.8			
	110412N-GU	●	●				1.2			
	DNMG150404N-GU	●	●	12.7	4.76	5.16	0.4			
	150408N-GU	●	●				0.8			
	150412N-GU	●	●				1.2			
	DNMG150608N-GU	●	●				12.7	6.35	5.16	0.8
	150612N-GU	●	●							1.2
	DNMG110408N-EG	●	●	9.525	4.76	3.81	0.8			
	110412N-EG	●	●				1.2			
	DNMG150404N-EG	●	●				12.7	4.76	5.16	0.4
	150408N-EG	●	●	0.8						
	150412N-EG	●	●	1.2						
	DNMG150604N-EG	●	●	12.7	6.35	5.16				0.4
	150608N-EG	●	●							0.8
	150612N-EG	●	●				1.2			
	DNMG150408N-EM	●	●	12.7	4.76	5.16	0.8			
	150412N-EM	●	●				1.2			
	150416N-EM	●	●				1.6			
	DNMG150608N-EM	●	●	12.7	6.35	5.16	0.8			
	150612N-EM	●	●				1.2			
	150616N-EM	●	●				1.6			
	DNMG150608N-EM	●	●				12.7	6.35	5.16	0.8
	150612N-EM	●	●							1.2
150616N-EM	●	●	1.6							
	DNMG150404R-HM	●	●	12.7	4.76	5.16	0.4			
	150404L-HM	●	●				0.4			
	150408R-HM	●	●				0.8			
	150408L-HM	●	●				0.8			

○ ネガティブ正方形 Negative Square Type

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	SNMG120408N-SU	●	●	12.7	4.76	5.16	0.8
	SNMG120404N-EF	●	●	12.7	4.76	5.16	0.4
	120408N-EF	●	●				0.8
	SNMG120404N-EX	●	●	12.7	4.76	5.16	0.4
	120408N-EX	●	●				0.8
	120412N-EX	●	●				1.2
	SNMG120404N-UP	●	●	12.7	4.76	5.16	0.4
	120408N-UP	●	●				0.8
	120412N-UP	●	●				1.2
	SNMG120404N-GU	●	●	12.7	4.76	5.16	0.4
	120408N-GU	●	●				0.8
	120412N-GU	●	●				1.2





◇ ネガティブ55°菱形 Negative 55°Diamond Type

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions						
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius			
	DNMG110404N-SU	●	●	9.525	4.76	3.81	0.4			
	110408N-SU	●	●				0.8			
	110412N-SU	●	●				1.2			
	DNMG150402N-SU	●	●				12.7	4.76	5.16	0.2
	150404N-SU	●	●							0.4
150408N-SU	●	●	0.8							
150412N-SU	●	●	1.2							
	DNMG110404N-EF	●	●	9.525	4.76	3.81	0.4			
	110408N-EF	●	●				0.8			
	110412N-EF	●	●				1.2			
	DNMG150404N-EF	●	●	12.7	4.76	5.16	0.4			
	150408N-EF	●	●				0.8			
	150412N-EF	●	●				1.2			
	DNMG150604N-EF	●	●				12.7	6.35	5.16	0.4
150608N-EF	●	●	0.8							
150612N-EF	●	●	1.2							









●印：標準在庫品、無印：受注生産品
● mark : Standard stock item, Blank : Made to order item

ネガティブチップ Negative Insert







ネガティブ正方形(つづき) Negative Square Type (Continued)

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	SNMG120404N-EG	●	●				0.4
	120408N-EG	●	●	12.7	4.76	5.16	0.8
	120412N-EG	●	●				1.2
	SNMG150612N-EG	●	●	15.875	6.35	6.35	1.2
	SNMG190612N-EG	●	●	19.05	6.35	7.94	1.2
190616N-EG	●	●				1.6	
	SNMG120408N-EM	●	●	12.7	4.76	5.16	0.8
	120412N-EM	●	●				1.2
	SNMG150612N-EM	●	●	15.875	6.35	6.35	1.2
	150616N-EM	●	●				1.6
	SNMG190612N-EM	●	●	19.05	6.35	7.94	1.2
190616N-EM	●	●				1.6	
	SNGG120408R-HM	●	●	12.7	4.76	5.16	0.8
	120408L-HM	●	●				0.8
	SNMM120408N-MP	●	●				0.8
	120412N-MP	●	●	12.7	4.76	5.16	1.2
	120416N-MP	●	●				1.6
	SNMM190612N-MP	●	●	19.05	6.35	7.94	1.2
	190616N-MP	●	●				1.6
	SNMM250724N-MP	●	●	25.4	7.94	9.2	2.4
	SNMM250924N-MP	●	●	25.4	9.52	9.2	2.4
SNMM310924N-MP	●	●	31.75	9.52	8.8	2.4	








ネガティブ三角形 Negative Triangular Type

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	TNMG160402N-SU	●	●				0.2
	160404N-SU	●	●				0.4
	160408N-SU	●	●	12.7	4.76	5.16	0.8
	160412N-SU	●	●				1.2
	TNMG160404N-EF	●	●	12.7	4.76	5.16	0.4
	160408N-EF	●	●				0.8
	TNMG160404N-EX	●	●				0.4
	160408N-EX	●	●	12.7	4.76	5.16	0.8
	160412N-EX	●	●				1.2
	TNMG160404N-UP	●	●				0.4
	160408N-UP	●	●	12.7	4.76	5.16	0.8
	160412N-UP	●	●				1.2
	TNMG160404N-GU	●	●				0.4
	160408N-GU	●	●	12.7	4.76	5.16	0.8
	160412N-GU	●	●				1.2
	EG	●	●				0.4
	160408N-EG	●	●	12.7	4.76	5.16	0.8
	160412N-EG	●	●				1.2
	TNMG160408N-EM	●	●	12.7	4.76	5.16	0.8
	160412N-EM	●	●				1.2
	TNMG160404R-HM	●	●				0.4
	160404L-HM	●	●				0.4
	160408R-HM	●	●	12.7	4.76	5.16	0.8
	160408L-HM	●	●				0.8

ネガティブ35°菱形(つづき) Negative 35°Diamond Type (Continued)












形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	VNMG160402N-SU	●	●				0.2
	160404N-SU	●	●	9.525	4.76	3.81	0.4
	160408N-SU	●	●				0.8
	VNMG160402N-EF	●	●				0.2
	160404N-EF	●	●	9.525	4.76	3.81	0.4
	160408N-EF	●	●				0.8
	VNMG160404N-EX	●	●	9.525	4.76	3.81	0.4
	160408N-EX	●	●				0.8
	VNMG160404N-UP	●	●	9.525	4.76	3.81	0.4
	160408N-UP	●	●				0.8
	VNMG160404N-GU	●	●	9.525	4.76	3.81	0.4
	160408N-GU	●	●				0.8
	VNMG160404N-EG	●	●				0.4
	160408N-EG	●	●	9.525	4.76	3.81	0.8
	160412N-EG	●	●				1.2

ネガティブ六角形 Negative Trigon Type

形状 Appearance	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
		AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	WNMG060404N-SU	●	●				0.4
	060408N-SU	●	●	9.525	4.76	3.81	0.8
	060412N-SU	●	●				1.2
	WNMG080404N-SU	●	●				0.4
	080408N-SU	●	●	12.7	4.76	5.16	0.8
080412N-SU	●	●				1.2	
	WNMG060404N-EF	●	●	9.525	4.76	3.81	0.4
	060408N-EF	●	●				0.8
	WNMG080404N-EF	●	●	12.7	4.76	5.16	0.4
	080408N-EF	●	●				0.8
	WNMG080404N-EX	●	●				0.4
	080408N-EX	●	●	12.7	4.76	5.16	0.8
	080412N-EX	●	●				1.2
	WNMG080408N-UP	●	●	12.7	4.76	5.16	0.8
	080412N-UP	●	●				1.2
	WNMG060404N-GU	●	●				0.4
	060408N-GU	●	●	9.525	4.76	3.81	0.8
	060412N-GU	●	●				1.2
	WNMG080404N-GU	●	●				0.4
	080408N-GU	●	●	12.7	4.76	5.16	0.8
080412N-GU	●	●				1.2	
	WNMG060412N-EG	●	●	9.525	4.76	3.81	1.2
	WNMG080404N-EG	●	●				0.4
	080408N-EG	●	●	12.7	4.76	5.16	0.8
	080412N-EG	●	●				1.2
	WNMG080408N-EM	●	●	12.7	4.76	5.16	0.8
	080412N-EM	●	●				1.2

ポジティブチップ Positive Insert







ポジティブ80°菱形 Positive 80°Diamond Type

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	7°	CCMT060202N-LU	●	●	6.35	2.38	2.8	0.2
		060204N-LU	●	●				0.4
		CCMT09T304N-LU	●	●	9.525	3.97	4.4	0.4
	7°	09T308N-LU	●	●				0.8
		CCMT060202N-LB	●	●	6.35	2.38	2.8	0.2
		060204N-LB	●	●				0.4
	7°	060208N-LB	●	●				0.8
		CCMT09T302N-LB	●	●				0.2
		09T304N-LB	●	●	9.525	3.97	4.4	0.4
	7°	09T308N-LB	●	●				0.8
		CCMT060202N-SU	●	●	6.35	2.38	2.8	0.2
		060204N-SU	●	●				0.4
	7°	060208N-SU	●	●				0.8
		CCMT09T302N-SU	●	●				0.2
		09T304N-SU	●	●	9.525	3.97	4.4	0.4
	7°	09T308N-SU	●	●				0.8
		CCMT09T304N-MU	●	●	9.525	3.97	4.4	0.4
		09T308N-MU	●	●				0.8
	11°	CPMT090304N-LU	●	●	9.525	3.18	4.4	0.4
		090308N-LU	●	●				0.8
	11°	CPMT080204N-LB	●	●	7.94	2.38	3.4	0.4
		CPMT090304N-LB	●	●	9.525	3.18	4.4	0.4
	11°	090308N-LB	●	●				0.8
		CPMT090304N-SU	●	●	9.525	3.18	4.4	0.4
	11°	090308N-SU	●	●				0.8
		CPMT090304N-MU	●	●	9.525	3.18	4.4	0.4
	11°	090308N-MU	●	●				0.8












ポジティブ55°菱形 Positive 55°Diamond Type

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	7°	DCMT070202N-LU	●	●	6.35	2.38	2.8	0.2
		070204N-LU	●	●				0.4
		DCMT11T304N-LU	●	●	9.525	3.97	4.4	0.4
	7°	11T308N-LU	●	●				0.8
		DCMT070202N-LB	●	●	6.35	2.38	2.8	0.2
		070204N-LB	●	●				0.4
	7°	070208N-LB	●	●				0.8
		DCMT11T302N-LB	●	●				0.2
		11T304N-LB	●	●	9.525	3.97	4.4	0.4
	7°	11T308N-LB	●	●				0.8
		DCMT070202N-SU	●	●	6.35	2.38	2.8	0.2
		070204N-SU	●	●				0.4
	7°	070208N-SU	●	●				0.8
		DCMT11T302N-SU	●	●				0.2
		11T304N-SU	●	●	9.525	3.97	4.4	0.4
	7°	11T308N-SU	●	●				0.8
		DCMT11T304N-MU	●	●	9.525	3.97	4.4	0.4
		11T308N-MU	●	●				0.8

ポジティブ正方形 Positive Square Type

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	7°	SCMT09T304N-LU	●	●	9.525	3.97	4.4	0.4
		09T308N-LU	●	●				0.8
	7°	SCMT09T304N-LB	●	●	9.525	3.97	4.4	0.4
		09T308N-LB	●	●				0.8
	7°	SCMT09T304N-SU	●	●	9.525	3.97	4.4	0.4
		09T308N-SU	●	●				0.8
	7°	SCMT09T308N-MU	●	●	9.525	3.97	4.4	0.8
	11°	SPMT090304N-LU	●	●	9.525	3.18	3.4	0.4
		090308N-LU	●	●				0.8
	11°	SPMT090304N-LB	●	●	9.525	3.18	3.4	0.4
		090308N-LB	●	●				0.8



ポジティブ三角形 Positive Triangular Type

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M	AC6040M	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
	7°	TCMT110204N-LU	●	●	6.35	2.38	2.8	0.4
		110208N-LU	●	●				0.8
	7°	TCMT110204N-LB	●	●	6.35	2.38	2.8	0.4
		110208N-LB	●	●				0.8
	7°	TCMT110204N-SU	●	●	6.35	2.38	2.8	0.4
		110208N-SU	●	●				0.8
	11°	TCMT16T304N-SU	●	●	9.525	3.97	4.3	0.4
		16T308N-SU	●	●				0.8
	11°	TPMT080202N-LU	●	●	4.76	2.38	2.4	0.2
		080204N-LU	●	●				0.4
	11°	TPMT110304N-LU	●	●	6.35	3.18	3.4	0.4
		110308N-LU	●	●				0.8
	11°	TPMT080202N-LB	●	●	4.76	2.38	2.4	0.2
		080204N-LB	●	●				0.4
		TPMT090202N-LB	●	●	5.56	2.38	2.8	0.2
		090204N-LB	●	●				0.4
		TPMT110302N-LB	●	●	6.35	3.18	3.4	0.2
		110308N-LB	●	●				0.8
	11°	TPMT160304N-LB	●	●	9.525	3.18	4.4	0.4
		160308N-LB	●	●				0.8
		TPMT160404N-LB	●	●	9.525	4.76	4.4	0.4
		160408N-LB	●	●				0.8
	11°	TPMT080202N-SU	●	●	4.76	2.38	2.4	0.2
		080204N-SU	●	●				0.4
		TPMT110302N-SU	●	●	6.35	3.18	3.4	0.2
	11°	110304N-SU	●	●				0.4
		110308N-SU	●	●				0.8
		TPMT160404N-SU	●	●	9.525	4.76	4.4	0.4
	11°	160408N-SU	●	●				0.8







●印：標準在庫品、●印：標準在庫品(拡充品)、無印：受注生産品
●mark : Standard stock item, ●mark : Standard stock item(expanded), Blank : Made to order item

ポジティブチップ Positive Insert


△ ポジティブ三角形(つづき) Positive Triangular Type(Continued)

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M New	AC6040M New	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
 MU	11°	TPMT110304N-MU	●		6.35	3.18	3.4	0.4
		110308N-MU	●					0.8
 MU	11°	TPMT160404N-MU	●		9.525	4.76	4.4	0.4
		160408N-MU	●					0.8

◇ ポジティブ35°菱形 Positive 35°Diamond Type

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M New	AC6040M New	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
 LU	5°	VBMT110308N-LU	●	●	6.35	3.18	2.8	0.8
		VBMT160404N-LU	●	●	9.525	4.76	4.4	0.4
		160408N-LU	●	●				0.8
 LB	5°	VBMT110302N-LB <i>New</i>	●	●	6.35	3.18	2.8	0.2
		110304N-LB <i>New</i>	●	●				0.4
		110308N-LB <i>New</i>	●	●				0.8
		VBMT160404N-LB	●	●	9.525	4.76	4.4	0.4
		160408N-LB	●	●				0.8
		160412N-LB	●	●				1.2
 SU	5°	VBMT110308N-SU	●		6.35	3.18	2.8	0.8
		VBMT160404N-SU	●	●	9.525	4.76	4.4	0.4
		160408N-SU	●	●				0.8
 LU	7°	VCMT160404N-LU	●		9.525	4.76	4.4	0.4
		160408N-LU	●					0.8
 LB	7°	VCMT080202N-LB <i>New</i>	●	●	4.76	2.38	2.3	0.2
		080204N-LB <i>New</i>	●	●				0.4
		VCMT160404N-LB <i>New</i>	●	●				9.525
160408N-LB <i>New</i>	●	●	0.8					
 SU	7°	VCMT080204N-SU	●	●	4.76	2.38	2.3	0.4
		VCMT110302N-SU	●					0.2
		110304N-SU	●		6.35	3.18	2.8	0.4
		110308N-SU	●					0.8
		VCMT160404N-SU	●		9.525	4.76	4.4	0.4
160408N-SU	●		0.8					

△ ポジティブ六角形 Positive Trigon Type

形状 Appearance	逃げ角 Relief angle	型番 Catalogue No.	在庫 Stock		寸法 (mm) Dimensions			
			AC6030M New	AC6040M New	内接円 Inscribed circle	厚さ Thickness	穴径 Hole diameter	ノーズ半径 Nose Radius
 LB	11°	WPMT110204N-LB	●	●	6.35	2.38	2.8	0.4
		WPMT160308N-LB	●	●	9.525	3.18	4.4	0.8

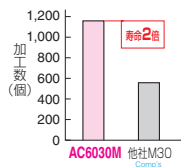
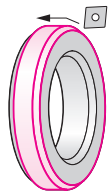
AC6030M

【SUS430 オートバイ部品】

SUS430 Motorcycle Part

優れた耐溶着性により、安定した加工面品位で2倍の長寿命

Ensures stable surface quality and 2 times longer tool life thanks to excellent adhesion resistance



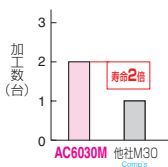
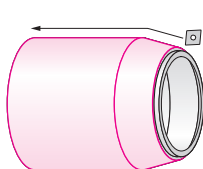
チップ Insert: CNMG120404N-EF (AC6030M)
 切削条件 Cutting Conditions: $v_c=120\text{m/min}$
 $f=0.10\text{mm/rev}$ $a_p=0.8\sim 1.5\text{mm}$ Wet

【SCS11 ポンプ部品】

SCS11 Pump Part

2.5倍の能率($v_c=60\rightarrow 100\text{m/min}$, $f=0.2\rightarrow 0.3\text{mm/rev}$)でも2倍の長寿命

Provides 2.5 times efficiency ($v_c=60\rightarrow 100\text{m/min}$, $f=0.2\rightarrow 0.3\text{mm/rev}$) and 2 times longer tool life



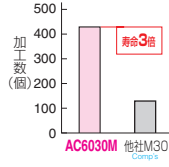
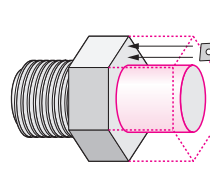
チップ Insert: CNMG120408N-EG (AC6030M)
 切削条件 Cutting Conditions: $v_c=100\text{m/min}$
 $f=0.3\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet

【SUS304 継手部品】

SUS304 Joint Component

六角材からの削り出しの粗～仕上げ加工を1材種で対応し、3倍の長寿命

Enables roughing and finishing in hexagonal bar shaping with one grade and achieves 3 times longer tool life



チップ Insert: CNMG120412N-GU (AC6030M)
 切削条件 Cutting Conditions: $v_c=50\sim 75\text{m/min}$
 $f=0.16\text{mm/rev}$ $a_p=2.0\text{mm}$ Wet

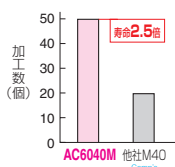
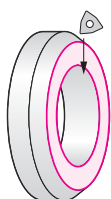
AC6040M

【SCS13 フランジ連結部品】

SCS13 Flange Joint Component

優れた耐摩耗性により、安定した加工面品位で2.5倍の長寿命

Provides stable machined surfaces and achieves 2.5 times longer tool life thanks to excellent wear resistance



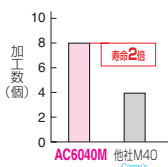
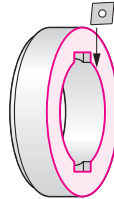
チップ Insert: WNMG080408N-EX (AC6040M)
 切削条件 Cutting Conditions: $v_c=140\sim 200\text{m/min}$
 $f=0.08\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet

【SCS13 カップリング】

SCS13 Coupling

優れた耐欠損性により2倍の長寿命

Achieves 2 times longer tool life thanks to excellent fracture resistance



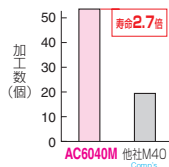
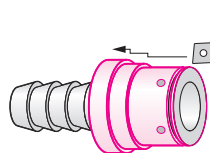
チップ Insert: CNMG120408N-EG (AC6040M)
 切削条件 Cutting Conditions: $v_c=70\sim 180\text{m/min}$
 $f=0.14\text{mm/rev}$ $a_p=2.5\text{mm}$ Wet

【SUS304 ニップル】

SUS304 Nipple

優れた耐溶着性により2.7倍の長寿命

Achieves 2.7 times longer tool life thanks to excellent adhesion resistance



チップ Insert: CNMG120408N-GU (AC6040M)
 切削条件 Cutting Conditions: $v_c=150\text{m/min}$
 $f=0.15\text{mm/rev}$ $a_p=1.5\text{mm}$ Wet

◆安全にお使いいただくために◆



- 高温の切りくずが飛散したり長く伸びた切りくずが排出されることがありますので、安全カバーや保護メガネ等の保護具を使用し、防災・防火に十分ご配慮ください。
- 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.

- 鋭い切れ刃を持っているため取扱いにご注意ください。
- 使用方法を誤ったり、使用条件が不適切な場合、工具破損、飛散を招きますので推奨条件の範囲内でご使用ください。
- 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.

- 不水溶性の切削液をご使用になる場合は、自動消火装置を設置するなどの対策を講じて頂き、火災にくれぐれもご注意ください。
- 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.

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