KORLOY NOTICE

SNC805/SPC810, SNC840/SPC845
Super Coating Series

Purpose

Promote our Super Coating grades specially designed for machining heat-resistant alloys such as Inconel, Rene, Titanium, and difficult-to-cut Stainless steels

Subject items

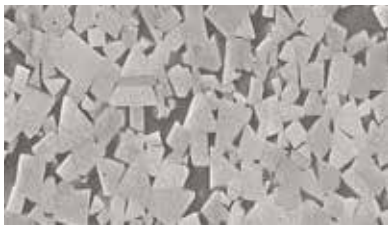
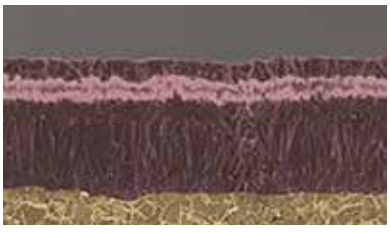
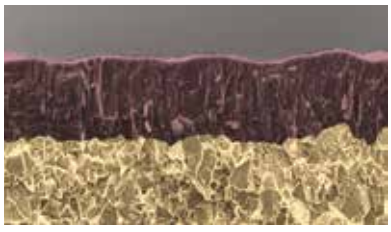
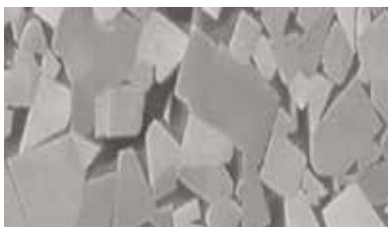
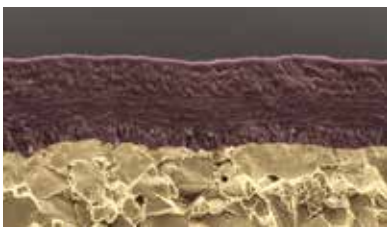
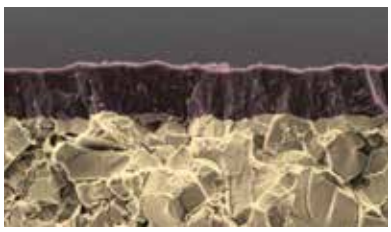
» Super Coating Series

Type			Grade	Description
Turning	CVD	S05	SNC805	First recommended grade for heat-resistant alloys turning, suitable for high-speed, continuous cutting and large-scale workpieces
	PVD	S10	SPC810	Recommended for high-feed and interrupted cutting conditions compared to SNC805
Milling	CVD	S40	SNC840 new	First recommended grade for milling heat-resistant alloys milling (excellent versatility)
	PVD	S45	SPC845 new	Recommended for high-feed and heavy interrupted cutting conditions compared to SNC840

Features

» Achieves high-speed machining of difficult-to-cut materials by maximizing the bond strength and heat resistance of the substrate.

» Provides stable tool life in various machining environments through the application of Super Coating.

Substrate	SNC805 Coating (CVD)	SPC810 Coating (PVD)
		
Substrate	**SNC840 Coating (CVD)**	**SPC845 Coating (PVD)**
		

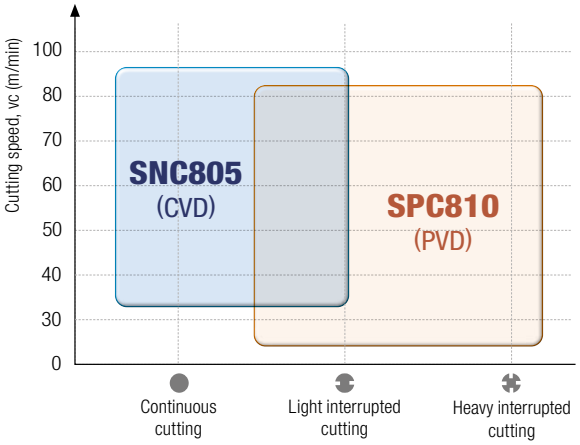
Effective Date

» From April 2026

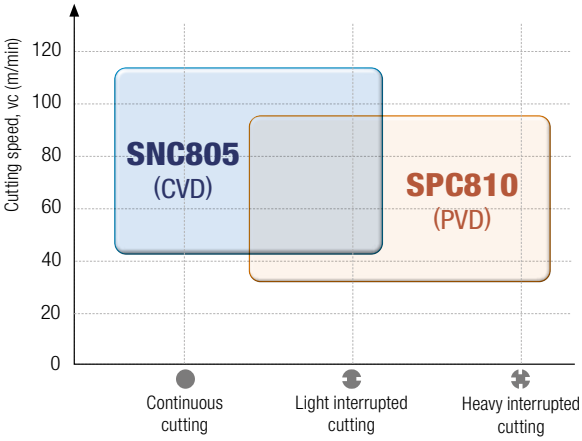
Application range

Turning

S Inconel alloy

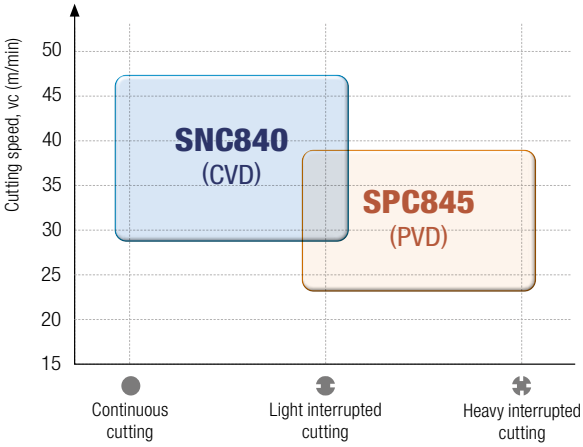


S Titanium alloy

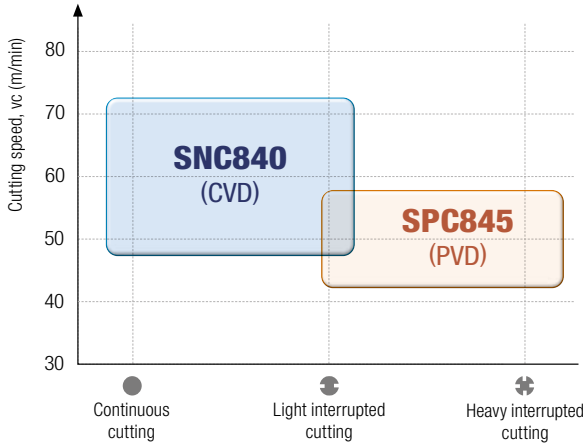


Milling

S Inconel alloy



S Titanium alloy



Grade comparison

Turning

Nuance	KORLOY	SANDVIK	TAEGUTEC	KENNAMETAL	MITSUBISHI	TUNGALOY
S05	SNC805	S05F	TT3005	KCM15	US905	-
S10	SPC810	GC1105	TT3010 TT05C	KCU10 KC5010	MP9015	AH8015

Milling

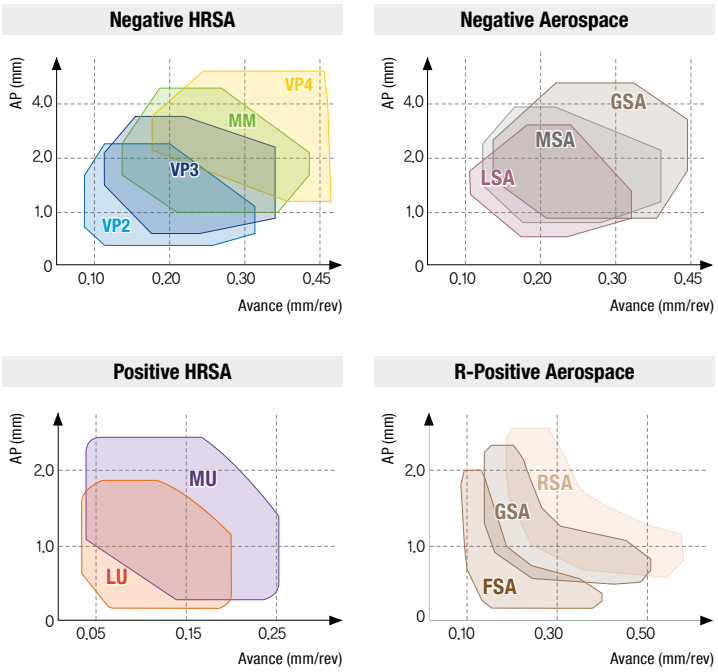
Nuance	KORLOY	SANDVIK	TAEGUTEC	KENNAMETAL	MITSUBISHI	TUNGALOY
S40	SNC840	S40T	TT9540	CTC5235 CTC5240	IC928	WSP45G WSM45X
S45	SPC845	S30T GC2040	TT3540 DX40RP	-	IC830 IC882	WSP45S

Chip Breaker (Turning)

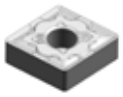
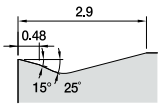
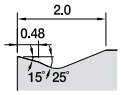
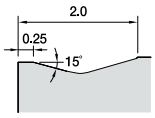
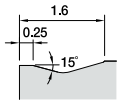
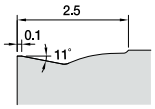
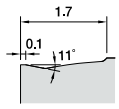
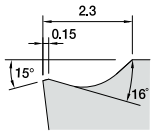
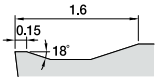
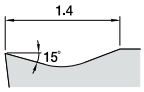
Line-Up

Range	Plaquette négative		Positive	R Positive
	HRSA	Aerospace (Engine parts)	HRSA	Aerospace (Engine parts)
Roughing	VP4	-	-	RSA
Medium to Roughing	MM	GSA	-	GSA
Medium	VP3	MSA	MU	-
Medium to Finishing	VP2	LSA	-	-
Finishing	-	-	LU	FSA

Cutting application range



Chip Breaker Features (Aerospace parts)

Chip Breaker		Picture	Designation	Nose R	Side	Feature
Negative	GSA		CNMG120408			**Medium roughing (G: Genernal)** **Aerospace (S grade, Inconel) chip breaker** The 1st recommended chip breakers for machining Inconel engine parts which remains highly resistant to and hard at high temperature
	MSA		SNMG120408			**Medium (M: Medium)** **Aerospace (S grade, Inconel) chip breaker** Minimize heat concentration at high depth of cut Improves stability in interrupted machining of a tough workpiece
	LSA		DNMG150612			**Light medium (L: Light)** **Aerospace (S grade, Inconel) chip breaker** Improves cutting performance with its stable chip control
R-Positive	RSA		RCMT1204M0		-	**Roughing (R: Rough)** **Aerospace (S grade, Inconel) chip breaker** Suitable for high interrupted machining due to strong cutting edge - Increased tool life by smooth chip evacuation in high cutting condition
	GSA		RCMT10T3M0		-	**Medium roughing (G: Genernal)** **Aerospace (S grade, Inconel) chip breaker** Stable chip evacuation at high speeds/feeds Improved surface finishes by reduced workpiece scratches caused by work-hardened chips at high depths of cut prevents built-up edge
	FSA		RCMT0803M0		-	**Finishing (F: Finish)** **Aerospace (S grade, Inconel) chip breaker** Recommended chip breaker for excellent chip control

Recommended cutting conditions

Turning

Application	ISO	Grade	Condition	Chip Breaker	Recommended cutting condition								
					Inconel alloy			Titanium alloy			Precipitation hardening Stainless steel (17-4PH, 15-5PH)		
					vc (m/min)	fz (mm/rev)	ap (mm)	vc (m/min)	fz (mm/rev)	ap (mm)	vc (m/min)	fz (mm/rev)	ap (mm)
Finishing	Nega	SNC805	Good chip contr.	MM, MSA	35 - 100	0.1 - 0.2	≤ 1.0	45 -110	0.1- 0.2	≤ 1.0	50 - 130	0.1- 0.2	≤ 1.0
			1st recom.	VP4, GSA			≤ 2.5			≤ 2.5			≤ 2.5
			Good toughness	VP4			≤ 3.0			≤ 3.0			≤ 3.0
		SPC810	Good chip contr.	MM, MSA	25 - 90	0.1- 0.3	≤ 1.0	35 - 100	0.1- 0.3	≤ 1.0	40 -100	0.1- 0.3	≤ 1.0
			1st recom.	VP4, GSA			≤ 2.5			≤ 2.5			≤ 2.5
			Good toughness	VP4			≤ 3.0			≤ 3.0			≤ 3.0
Medium - Roughing	Nega	SNC805	Good chip contr.	MM, VP2, LSA	35 -100	0.1- 0.25	≤ 1.0	45 -110	0.1 - 0.25	≤ 1.0	50 - 130	0.1 - 0.25	≤ 1.0
			1st recom.	VP3, MSA			≤ 2.5			≤ 2.5			≤ 2.5
			Good toughness	VP4, GSA			≤ 3.0			≤ 3.0			≤ 3.0
		SPC810	Good chip contr.	MM, VP2, LSA	25 - 90	0.1 - 0.3	≤ 1.0	35 - 100	0.1- 0.3	≤ 1.0	40- 100	0.1 - 0.3	≤ 1.0
			1st recom.	VP3, MSA			≤ 2.5			≤ 2.5			≤ 2.5
			Good toughness	VP4, GSA			≤ 3.0			≤ 3.0			≤ 3.0
Finishing - Roughing	Posi	SNC805	Good chip contr.	LU, FSA	35 - 100	0.1 - 0.2	≤ 0.5	45 - 110	0.1 - 0.2	≤ 0.5	50 - 130	0.1- 0.2	≤ 0.5
			1st recom.	MU, GSA			≤ 1.0			≤ 1.0			≤ 1.0
			Good toughness	MU, RSA			≤ 1.5			≤ 1.5			≤ 1.5
		SPC810	Good chip contr.	LU, FSA	25 -90	0.1 - 0.25	≤ 0.5	35 - 100	0.1- 0.25	≤ 0.5	40 -100	0.1 - 0.25	≤ 0.5
			1st recom.	MU, GSA			≤ 1.0			≤ 1.0			≤ 1.0
			Good toughness	MU, RSA			≤ 1.5			≤ 1.5			≤ 1.5

Above conditions are based on the workpiece diameter Ø100 (Workpiece hardness : HRC 38 ~ 45). According to a customer's working environment, it is suggested to start applying 80% of the recommended conditions if the working condition has a flaw like unstable clamping.

Milling

Tool	Deignation	Machining type	Recom. Grade	Recommended cutting condition											
				Inconel alloy				Titanium alloy				Precipitation hardening Stainless steel (17-4PH, 15-5PH)			
				vc (m/min)	fz (mm/rev)	ap (mm)	ae (mm)	vc (m/min)	fz (mm/rev)	ap (mm)	ae (mm)	vc (m/min)	fz (mm/rev)	ap (mm)	ae (mm)
FMR P-Positive	RPMT10T3M0E RPMT1204M0E	Continuous-Interrupted	SNC840	30-50	0.3-0.5	≤ 2.0	≤ 0.7D	40-80	0.4-0.5	≤ 2.0	≤ 0.7D	150-250	0.4-0.5	≤ 2.0	≤ 0.7D
		Interrupted Cutting	SPC845	20-40	0.4-0.6	≤ 2.0	≤ 0.7D	20-60	0.4-0.6	≤ 2.0	≤ 0.7D	140-200	0.4-0.6	≤ 2.0	≤ 0.7D
HFMD	LNMX040205R LNMX060310R	Continuous-Interrupted	SNC840	30-50	0.4-0.7	≤ 1.0	≤ 0.7D	40-80	0.4-0.8	≤ 1.0	≤ 0.7D	60-200	0.4-0.8	≤ 1.0	≤ 0.7D
		Interrupted Cutting	SPC845	20-40	0.5-0.8	≤ 1.0	≤ 0.7D	20-60	0.5-1.0	≤ 1.0	≤ 0.7D	60-200	0.5-1.0	≤ 1.0	≤ 0.7D
Alpha Mill-X	ADKT10T308PESR ADKT120408PESR ADKT170608PESR	Continuous-Interrupted	SNC840	30-50	0.05-0.1	≤ 9.0	≤ 0.3D	40-80	0.1-0.15	≤ 9.0	≤ 0.3D	70-150	0.1-0.15	≤ 9.0	≤ 0.3D
		Interrupted Cutting	SPC845	20-40	0.08-0.12	≤ 9.0	≤ 0.3D	20-60	0.1-0.2	≤ 9.0	≤ 0.2D	50-120	0.1-0.2	≤ 9.0	≤ 0.2D
HQM	SQMT120516R SQMT140520R	Continuous-Interrupted	SNC840	30-50	0.3-0.8	≤ 2.0	≤ 0.7D	40-80	0.5-1.2	≤ 2.0	≤ 0.7D	80-210	0.5-1.2	≤ 2.0	≤ 0.7D
		Interrupted Cutting	SPC845	20-40	0.4-1.0	≤ 2.0	≤ 0.7D	20-60	0.6-1.4	≤ 2.0	≤ 0.7D	65-170	0.6-1.4	≤ 2.0	≤ 0.7D
RMR	RNMX1204M0E	Continuous-Interrupted	SNC840	30-50	0.3-0.8	≤ 2.0	≤ 0.7D	40-80	0.5-1.2	≤ 2.0	≤ 0.7D	150-250	0.4-0.5	≤ 2.0	≤ 0.7D
		Interrupted Cutting	SPC845	20-40	0.4-1.0	≤ 2.0	≤ 0.7D	20-60	0.6-1.4	≤ 2.0	≤ 0.7D	140-200	0.4-0.6	≤ 2.0	≤ 0.7D
RM6	WNGX040308PNER WNGX080608PNER	Continuous-Interrupted	SNC840	30-50	0.1-0.3	≤ 8.0	≤ 0.3D	40-80	0.1-0.3	≤ 8.0	≤ 0.3D	90-160	0.1-0.3	≤ 8.0	≤ 0.3D
		Interrupted Cutting	SPC845	20-40	0.15-0.4	≤ 8.0	≤ 0.3D	20-60	0.15-0.4	≤ 8.0	≤ 0.3D	70-120	0.15-0.4	≤ 8.0	≤ 0.3D
HRMD	WNMX09T316ZNN WNMX130520ZNN	Continuous-Interrupted	SNC840	30-50	0.3-0.5	≤ 1.5	≤ 0.7D	40-80	0.3-0.5	≤ 1.5	≤ 0.7D	100-150	0.3-0.5	≤ 1.5	≤ 0.7D
		Interrupted Cutting	SPC845	20-40	0.4-0.6	≤ 1.5	≤ 0.7D	20-60	0.4-0.6	≤ 1.5	≤ 0.7D	80-130	0.4-0.6	≤ 1.5	≤ 0.7D

Drilling

Tool	Deignation	Machining type	Recom. Grade	Recommended cutting condition											
				Inconel alloy				Titanium alloy				Precipitation hardening Stainless steel (17-4PH, 15-5PH)			
				vc (m/min)	fz (mm/rev)	ap (mm)	ae (mm)	vc (m/min)	fz (mm/rev)	ap (mm)	ae (mm)	vc (m/min)	fz (mm/rev)	ap (mm)	ae (mm)
KING Drill	XOMT SPMT	Interrupted Cutting	KEP8545	50-130	0.04-0.1	-	-	60-100	0.06-0.15	-	-	120-180	0.04-0.12	-	-

Performance evaluation

Inconel alloy (Inconel718)

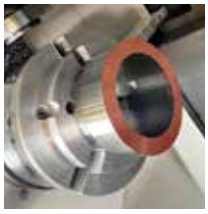
Workpiece use	Inconel External/Facing Turning (Customer test)
Cutting condition	vc = 45 m/min · fn = 0.2 mm/rev · ap = 0.5 mm · Wet
Tool	**Insert** VBGT160408-MU (SPC810) **Holder** SVJNR2525-M12N

SPC810 Concurrent

▶ **Material removal rate Q = 5.0 cm³/min**
Cutting time = 12 min

Tianium alloy (Ti-6Al-4V)

Workpiece use	Tianium alloy Facing Turning (Customer test)
Cutting condition	vc = 65 m/min · fn = 0.2 mm/rev · ap = 1.8 mm · Wet
Tool	**Insert** CNMG120408-VP4 (SNC805) **Holder** LNR3232-M12

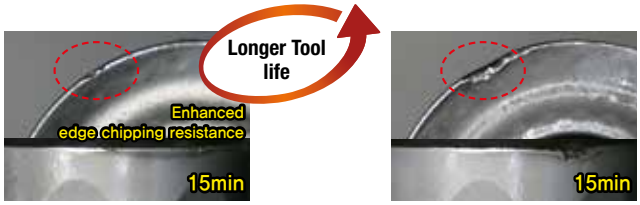


SNC805 Concurrent

▶ **Material removal rate Q = 23.0 cm³/min**
Cutting time = 25 min

Inconel alloy (Inconel718)

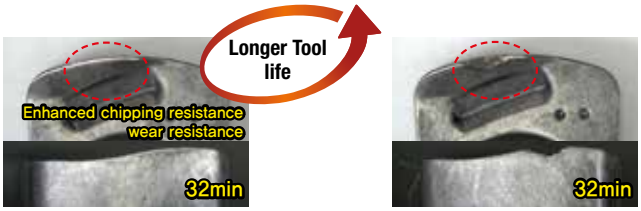
Workpiece use	Aerospace engine case
Cutting condition	vc = 35 m/min · fn = 0.4 mm/rev · ap = 1.0 mm · ae = variable · Wet
Tool	**Insert** RPMT1204M0E-ML3 (SNC840) **Holder** FMRCM55RP-HW



SNC840 Existing

Tianium alloy (Ti-6Al-4V)

Workpiece use	Turbine blade
Cutting condition	vc = 60 m/min · fn = 0.6 mm/rev · ap = 0.5 mm · ae = variable · Wet
Tool	**Insert** LNMX060310R-MF (SPC845) **Holder** HFMDS032R-5C32-200-LN06



SPC845 Existing

Stock items Turning

Type	Designation		Coated	
			SNC805	SPC810
ISO Turning	CNMG	120404-FM	●	●
		120404-MM	○	
		120404-VP2	○	
		120408-FM	●	●
		120408-GSA	●	●
		120408-MM	▲	●
		120408-RM	○	
		120408-VP2	▲	●
		120408-VP3	●	●
		120408-VP4	▲	●
		120412-MM	▲	●
		120412-VP2		○
		120412-VP3	▲	●
		120412-VP4	▲	●
		160612-RM		●
		190612-MM	○	
		190612-VP4	○	
		190616-MM	●	
	DNMG	110404-MM	●	
		110408-MM	○	
		150604-FM		●
		150604-MM	▲	○
		150604-VP2	▲	
		150604-VP3	▲	○
		150604-VP4		○
		150608-FM	●	●
		150608-MM	▲	●
		150608-RM	○	
		150608-VP2	▲	
		150608-VP3		●
		150608-VP4	▲	●
		150612-LSA	●	●
		150612-RM	○	
	RCMT	1204M0-RSA	●	
	SNMG	120404-MM		
		120408-FM	●	●
		120408-MM	○	●
		120408-MSA	●	●
		120408-RM	○	
		120408-VP3	●	●
		120408-VP4	▲	○
		120412-MM	●	●
		120412-VP3		○
		120412-VP4	●	●
		150612-VP4	●	●
		190616-VP4	○	
	TNMG	160404-MM	○	
		160408-FM		●
		160408-MM	○	
		160408-RM	○	
		160408-VP3		○
		160412-VP3		○
	VBGT	160404-MU	▲	●
		160408-MU	▲	●
		160412-MU	●	●
	VBMT	160404-LU	▲	●
		160404-MP	▲	○
		160408-LU	▲	●
		160408-MP	▲	●
		160408-MU	▲	●
		160412-LU	●	●
		160412-MP	●	●

Type	Designation		Coated	
			SNC805	SPC810
ISO Turning	VNMG	160404-FM		●
		160404-MM	○	
		160404-VP2	○	
		160404-VP3	▲	●
		160408-FM		●
		160408-RM	○	
		160408-VP2	○	
		160408-VP3	●	
		160408-VP3		●
	WNMG	060404-MM	○	
		060408-MM	○	
		080404-MM	○	
		080404-VP2	○	
		080408-FM	●	●
		080408-GSA	●	
		080408-MM	▲	●
		080408-RM	○	
		080408-VP2	▲	●
		080408-VP3	●	●
		080408-VP4	▲	○
		080412-MM	▲	○
		080412-RM	○	
		080412-VP2	●	
		080412-VP3		●
		080412-VP4	▲	
KGT	KGMN	300-02-T	●	
		300-02-TL	●	●
		300-04-T	●	
		300-04-TL	●	●
		400-04-T	●	●
		400-04-TL	●	●
		400-08-T	●	
		400-08-TL	●	
		500-04-TL	●	●
		500-08-TL	○	○
		600-08-TL	●	●
	KRGN	300-CM SNC805	●	●
		400-CM SNC805	●	●
		500-CM SNC805	○	●

▲: Stock item Europe ●: Stock item Korea ○: Production on demand

Stock items Milling

Type	Designation		Coated	
			SNC840	SPC845
Alpha Mill-X	ADKT	10T304PEER-ML	●	●
		10T304PESR-MM	●	●
		10T308PEER-ML	●	○
		10T312PEER-ML	●	●
		10T316R-ML	●	○
		10T316R-MM	●	●
		11T308ER-ML	●	
		120404PESR-ML	○	
		120408ER-ML	●	
		120408PESR-ML	●	●
		120408PESR-MM	○	●
		120412PESR-MM	○	○
		120416PESR-MM	○	●
		120432R-ML	○	●
		150508ER-ML	●	
		170608PESR-ML	▲	●
		170608PESR-MM	▲	○
		170616PESR-MM	○	●
		170620PESR-MM	○	○
		170632PESR-MM		●
		170640R-MM		●
Alpha Mill	APMT	11T308PDER-ML	▲	○
		11T3PDER-ML	○	●
		160430R-MM	○	○
		160450R-MM	○	○
HFMD	LNMX	040205R-ML	●	●
		040205R-MM		●
		060310R-MF	●	●
		060310R-ML	▲	●
		060310R-MM	○	
		100412R-MF	●	●
		100412R-ML	●	▲
		100412R-ML		▲
	LPMT	040210R-MF	○	
		040220R-MF	○	
RM3	XNKT	060405PNER-ML	○	
		080508PNER-ML	○	●
	XNMX	0606XNR-ML	○	○
RM6	WNGX	040308PNER-ML	●	●
		080608PNER-ML	●	○
HRMD	WNMX	09T316ZNN-ML	▲	○
		130520ZNN-MF	○	○
		130520ZNN-ML	●	○

Type	Designation		Coated	
			SNC840	SPC845
GBE	ZPET	080M-MM	○	
		080S-MM	○	
		160M-MM		●
		160S-MM		●
Triple Mill	TNKT	110508PEER-ML		○
		160608PEER-ML		▲
		200708PEER-ML		○
TP4P	LNGX	130608PNR-ML	○	
		130608PNR-MM		○
TP2P	LNKT	080408PNR-ML	○	
RMR	RNMX	1204M0E-ML	●	
FMR P-Positive	RPET	10T3M0E-ML	●	
		1606M0E-ML	○	
	RPMT	10T3M0E-MF	●	○
		1204M0E-MF		○
		1204M0E-ML2		○
		1204M0E-ML3		○
		1204M0E-ML4		○
		1204M0S-MM	○	○
		1606M0E-MF	●	○
		1606M0E-ML1		○
		1606M0E-ML2		○
		1606M0S-MM		●
		2007M0E-MF		○

▲: Stock item Europe ●: Stock item Korea ○: Production on demand

Stock items Drilling

Type	Designation		Grade
			KEP8545
KING Drill	**SPMT**	040204-PD	▲
	Peri.	050204-PD	▲
		060205-PD	▲
		07T208-PD	▲
		090308-PD	▲
		11T308-PD	▲
		130410-PD	▲
		15M510-PD	▲
		180510-PD	▲
	XOMT	040204-PD	▲
	Centr.	050204-PD	▲
		060204-PD	▲
		07T205-PD	▲
		090305-PD	▲
		11T306-PD	▲
		130406-PD	▲
		15M508-PD	▲
		180508-PD	▲

▲: Stock item Europe ●: Stock item Korea ○: Production on demand

For any further information, please contact our customer support team!

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