

Next-generation PVD coating for milling

PR18 Series

NEW**Longer Tool Life with Next-generation Coating for Milling**

MEGACOAT NANO EX Coating Technology

Exceptional tool life



3 new grades for 16 different milling series

PR1825 for Steel (Wear resistance oriented)**PR1835 for Steel (Stability oriented)****for Stainless Steel****PR1810 for Cast Iron**

Product Lineup Expansion



Next-generation PVD coating for milling

PR18 Series

Double lamination technology with special nano layer

MEGACOAT NANO EX provides longer tool life

Features 3 grades: PR1825/PR1835/PR1810. Available for various machining environments



Double lamination technology

Special Nano Layer x Multilayer Lamination



AlTi-based
special nano layer



AlCr-based
special nano layer

CG Image

Kyocera's Nano Layer Coating Technology

Longer Tool Life with Next-generation Coating for Milling



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New PVD coating MEGACOAT NANO EX provides long tool life

Kyocera's Nano Layer Coating Technology

MEGACOAT NANO

Special nano-laminated coating
with excellent abrasion and oxidation resistance

MEGACOAT-based
Laminated structure

- High hardness
- Excellent oxidation resistance

MEGACOAT NANO EX

New coating property improvements



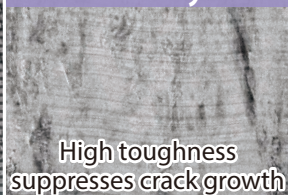
MEGACOAT
NANO EX | Milling |

Double Lamination Technology Maintains Longer Tool Life

Multi-layer structure with two unique nano layers
Superior abrasion resistance and fracture resistance

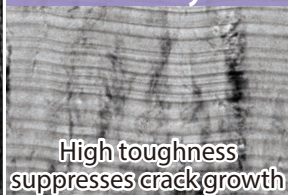
Special Nano Layer x Multilayer Lamination

Nano-Layer



AlCr-based coating
with excellent abrasion resistance

Nano-Layer



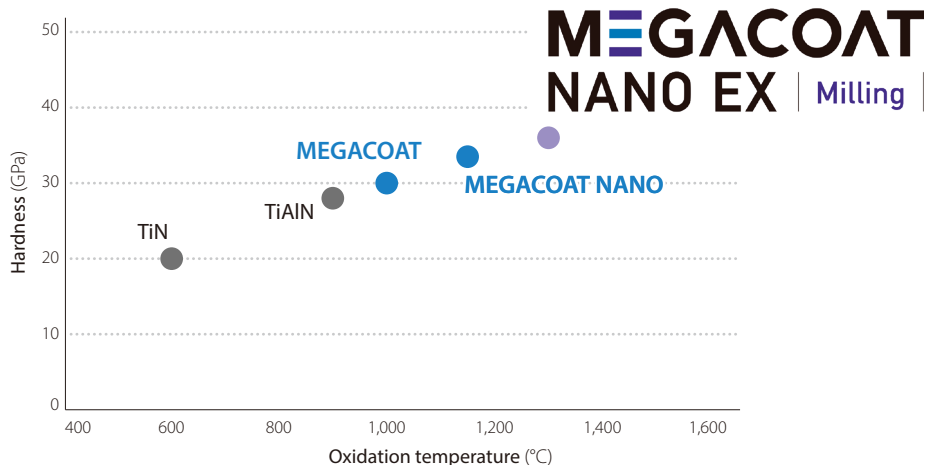
AlTi-based coating
with excellent heat resistance

Multi-layering of high-performance nano layers

Increases toughness with the suppression of crack growth and optimization of internal stress

CG Image

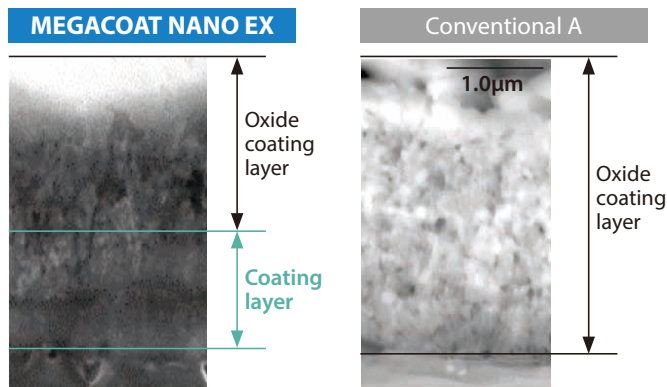
Coating characteristics (Internal evaluation)



Excellent oxidation resistance

Oxidation progression comparison (Internal evaluation)

Suppresses oxidation progression with excellent oxidation resistance

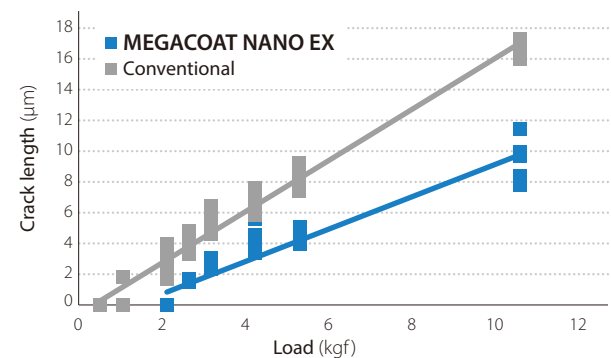
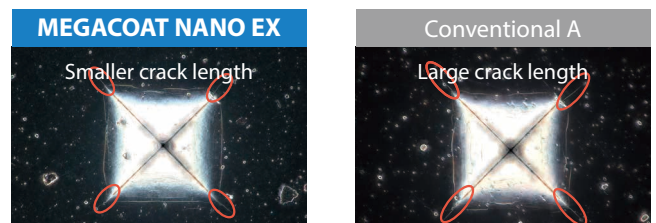


*Section after holding at 1,200 degrees for 30 minutes in air

High coating toughness

Coating layer toughness evaluation (Internal evaluation)

Excellent coating toughness with small crack length



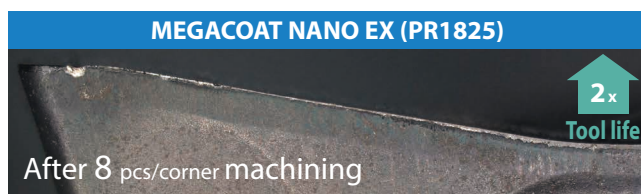
*Micro-Vickers measurement



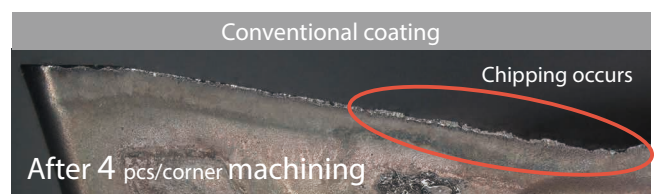
2x longer tool life. Cutting edge remains in good condition.

Guides S50C

Edge condition



MEGACOAT NANO EX has 2x longer tool life than conventional coating. The cutting edge remains in good condition. Quiet cutting noise



Cutting conditions: $V_c = 200$ m/min, $a_p = 2.0$ mm, $f_z = 0.13$ mm/t, Dry BDMT170408ER-JT (MEC)

(User evaluation)

2

Compatible with various machining environments. Substantial lineup

PR1825

P

for Steel (Wear resistance oriented)

PR1835

M

for Steel (Stability oriented)
for Stainless Steel (1st recommendation)

PR1810

K

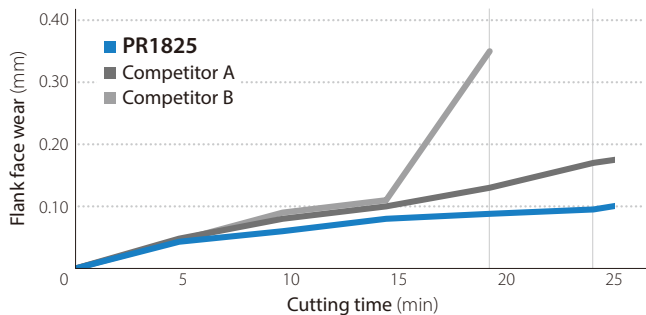
for Cast Iron

Workpiece material	P Steel					M Stainless steel					K Cast iron				
ISO	01	10	20	30	40	01	10	20	30	40	01	10	20	30	40
Lineup			Wear resistance oriented				1st recommendation				1st recommendation				
			PR1825				PR1835				PR1810				
			Stability oriented												
			PR1835												

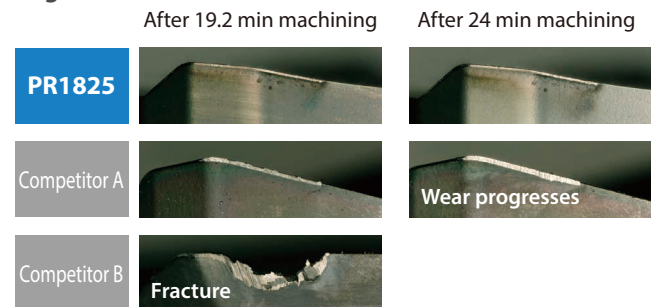
PR1825

Carbide base material with an excellent balance of hardness, toughness and versatility

Wear resistance comparison (Internal evaluation)



Edge condition

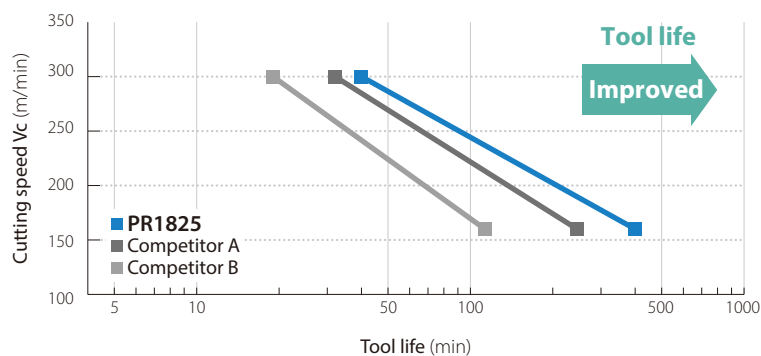


Cutting Conditions : $V_c = 150$ m/min, $a_p \times a_e = 2$ mm x 65 mm, $f_z = 0.12$ mm/t, SKD11, Dry PNMU1205ANER-GM (MFPN45)

V-T graph (Internal evaluation)

Life criteria :
Flank face wear = 0.10 mm

Cutting Conditions :
 $V_c = 160 / 300$ m/min
 $a_p \times a_e = 2$ x 110 mm, $f_z = 0.12$ mm/t
SCM440 Dry
PNMU1205ANER-GM (MFPN45)





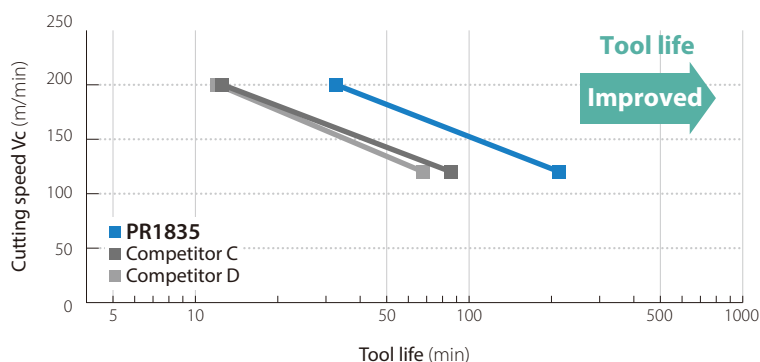
PR1835

Carbide base material with superior impact resistance and stability oriented
Improves the toughness of the base material by optimizing the particle shape and homogenizing the structure.

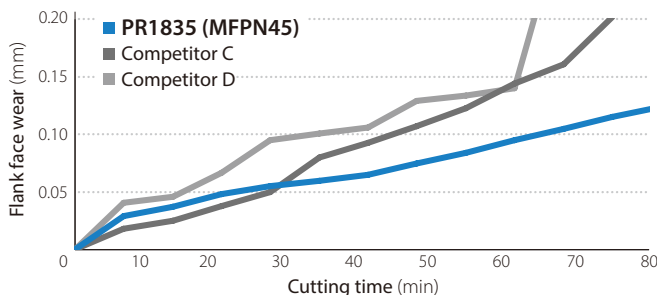
V-T graph (Internal evaluation)

Life criteria :
Flank face wear = 0.10 mm

Cutting Conditions :
Vc = 120 / 200 m/min
ap x ae = 2 x 110 mm, fz = 0.12 mm/t
SUS304 Dry
PNMU1205ANER-SM (MFPN45)

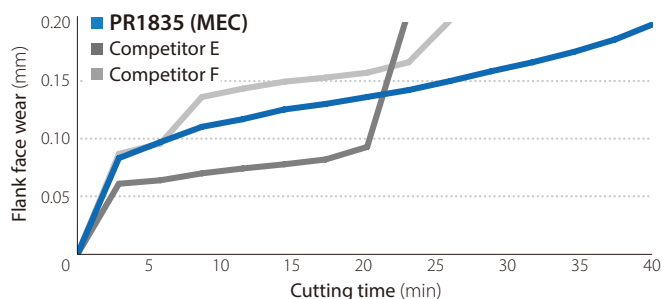


Wear resistance comparison (Internal evaluation)



Cutting Conditions : Vc = 150 m/min, ap x ae = 2 x 80 mm, fz = 0.1 mm/t
SUS304, Dry PNMU1205ANER-SM

Wear resistance comparison (Internal evaluation)

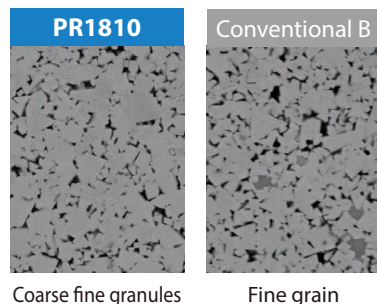


Cutting Conditions : Vc = 120 m/min, ap x ae = 2 x 15 mm, fz = 0.1 mm/t
SUS304, Dry BDMT11T308ER-JS

PR1810

Uses a proprietary base material with excellent thermal conductivity.
Achieving stable processing of cast iron

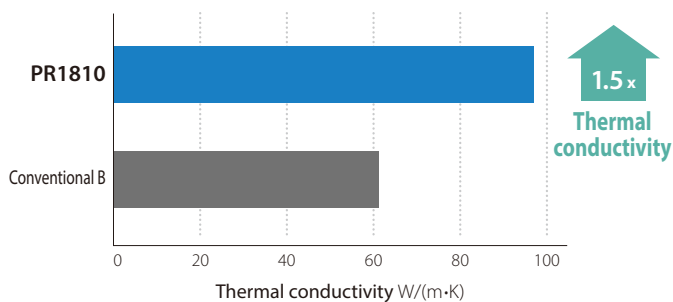
Carbide Substrate



Coarse fine granules

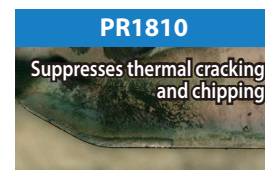
Fine grain

Thermal conductivity comparison (Internal evaluation)



Cutting edge condition (Internal evaluation)

After about 60 min machining



Cutting Conditions :
Vc = 200 m/min
ap x ae = 2 x 85 mm
fz = 0.2 mm/t
FCD450, Wet
PNMU1205ANER-GM (MFPN45)

PR1810 uses a mixture of coarse and fine grains. Improved thermal conductivity and reduced thermal cracking and chipping

Product Lineup

PR18 series for various applications

90° Cutting Edge Angle Type

Shouldering

Slotting

Facing

Double-sided inserts

Tangential 90° End Mill
with 4-edge Inserts

MA90

Original tangential 90° end mill
with economical 4-edge inserts

NEW

→P9



90° End Mill with Double Sided 4-edge Inserts

MEW

→P9



90° Helical End Mill with Double Sided 4-edge Inserts

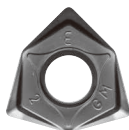
MEWH

→P9

Double-sided 6-edge Inserts, Low Cutting Force Cutter

MFWN

→P11



Double-sided 6-edge Inserts, Low Cutting Force Cutter

MFWN Mini

→P11



4-edge Face Mill with Vertical Inserts for Heavy Milling

MFLN90

→P11



Highly Efficient Cutter with a 88° Cutting Edge Angle

MFSN88 88° Cutting edge angle →P11



90° Cutting Edge Angle Type

Shouldering

Slotting

Facing

Single-sided inserts

High-Efficiency End Mill

MEC

→P10



High-Efficiency Helical End Mill

MECH

→P10



High-Efficiency and Low-Cutting-Force End Mill

MECX

→P10



High-Efficiency Face Mill for Heavy Milling

MSRS90

→P12



High-Efficiency Face Mill for Heavy Milling

MSR

→P12



45° Cutting Edge Angle Type

Facing

New 45° General Purpose Cutter

MB45

NEW

→P13



Delivers the "low cutting force" benefits of positive inserts and the "fracture resistance" benefits of negative inserts. Excellent surface finish



45° Face Mill with Double Sided 10-edge Inserts

MFPN45

→P13



High Precision and High Efficiency High Rake Cutter

MFSE45

→P13



Highly Efficient Cutter with a 66° Cutting Edge Angle

MFPN66 66° Cutting edge angle

→P13



45°/70°/75° Cutting Edge Angle Type

Facing

4-edge Face Mill with Vertical Inserts for Heavy Milling

MFLN45/MFLN70

→P14



High-Efficiency Face Mill for Heavy Milling

MSRS15 75° Cutting edge angle

→P14



High Efficiency Multi-edge Cutter for Cast Iron

MFK

70° Cutting edge angle

→P14



High Feed Cutter

Shouldering

Slotting

Pocketing

Facing

High Efficiency and High Feed Cutter

MFH Series

→P15

High Feed and Large Depth of Cut Milling

MFH Boost



Micro Dia. Cutter for High Feed Machining

MFH Micro



Small Dia. Cutter for High Feed Machining

MFH Mini



Highly Efficiency and High Feed Cutter

MFH Harrier



Radius Cutter

Shouldering

Pocketing

Facing

High-Efficiency Radius Cutter with Multiple Edges

MRW

→P16



Low-Cutting-Force and High-Efficiency Radius Cutter

MRX

→P16

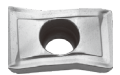


Others

Multi-Function End Mill

MEY

→P17



Chamfering End Mill

MCSE

→P17



Bolt Countersink End Mill

MEF

→P17



T-Slot Mill

METS

→P17



A lineup of milling insert supporting ISO standard is available.

90° Cutting Edge Angle Type

Shouldering

Slotting

Facing

Tangential 90° End Mill with 4-Edge Inserts

MA90

NEW

Original tangential 90° end mill with economical 4-edge inserts









90° End Mill with Double Sided 4-edge Inserts

MEW/MEWH




Reduces cutting force equivalent to positive inserts
Excellent surface finish



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose (G-Class)	LOGU 090404ER-GM	●	●	●
	090408ER-GM	●	●	●
	090412ER-GM	●	●	●
	090416ER-GM	●	●	●
 Low Cutting Force (G-Class)	LOGU 090404ER-SM	●	●	-
	090408ER-SM	●	●	-
	090412ER-SM	●	●	-
	090416ER-SM	●	●	-
 Tough Edge (G-class)	LOGU 090408ER-GH	●	●	●
 General Purpose (G-Class)	LOGU 120604ER-GM	●	●	●
	120608ER-GM	●	●	●
	120612ER-GM	●	●	●
	120616ER-GM	●	●	●
	120620ER-GM	●	●	●
	120624ER-GM	●	●	●
	120630ER-GM	●	●	●
 Low Cutting Force (G-Class)	LOGU 120604ER-SM	●	●	-
	120608ER-SM	●	●	-
	120612ER-SM	●	●	-
	120616ER-SM	●	●	-
	120620ER-SM	●	●	-
	120624ER-SM	●	●	-
	120630ER-SM	●	●	-
 Tough Edge (G-class)	LOGU 120608ER-GH	●	●	●

Right-Handed Insert Shown

● : Standard Stock

Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	LOMU 100404ER-GM	●	●	●
	100408ER-GM	●	●	●
	100412ER-GM	●	●	●
	100416ER-GM	●	●	●
	100420ER-GM	●	●	●
	LOMU 150504ER-GM	●	●	●
	150508ER-GM	●	●	●
	150510ER-GM	●	-	-
	150512ER-GM	●	●	●
	150516ER-GM	●	●	●
 Low Cutting Force	LOMU 100408ER-SM	●	●	●
	LOMU 150508ER-SM	●	●	●
 Tough Edge (for Heavy Cutting)	LOMU 100408ER-GH	●	●	●
	LOMU 150508ER-GH	●	●	●

Right-Handed Insert Shown



● : Standard Stock

High-Efficiency End Mill

MEC

Excellent surface finish with low cutting forces
Large lineup for various applications



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
	BDMT 110302ER-JT	●	●	●
	110304ER-JT	●	●	●
	110308ER-JT	●	●	●
	BDMT 11T302ER-JT	●	●	●
	11T304ER-JT	●	●	●
	11T308ER-JT	●	●	●
	11T312ER-JT	●	●	●
	11T316ER-JT	●	●	●
	11T320ER-JT	●	●	●
	11T324ER-JT	●	●	●
	11T331ER-JT	●	●	●
	BDMT 170404ER-JT	●	●	●
	170408ER-JT	●	●	●
	170412ER-JT	●	●	●
	170416ER-JT	●	●	●
	170420ER-JT	●	●	●
	170424ER-JT	●	●	●
	170431ER-JT	●	●	●
	170440ER-JT	●	●	●
	BDMT 110302ER-JS	●	●	-
	110304ER-JS	●	●	-
	110308ER-JS	●	●	-
	BDMT 11T302ER-JS	●	●	-
	11T304ER-JS	●	●	-
	11T308ER-JS	●	●	-
Low Cutting Force/ for Stainless Steel	BDMT 170404ER-JS	●	●	-
	170408ER-JS	●	●	-

Right-Handed Insert Shown





● : Standard Stock

High-Efficiency End Mill

MECH

Notched inserts reduce chattering
High efficiency heavy machining with large D.O.C.



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 2-Notched	BDMT 11T308ER-N2	●	●	●
 3-Notched	BDMT 11T308ER-N3	●	●	●
 3-Notched	BDMT 170408ER-N3	●	●	●
 4-Notched	BDMT 170408ER-N4	●	●	●



Right-Handed Insert Shown

● : Standard Stock

High-Efficiency End Mill

MECX

High-efficiency machining with fine pitch styles
Compatible with low-rigidity facilities

Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
	BDMT 070302ER-JT	●	●	●
	070304ER-JT	●	●	●
	070308ER-JT	●	●	●
 Low Cutting Force/ for Stainless Steel	BDMT 070302ER-JS	●	●	-
	070304ER-JS	●	●	-
	070308ER-JS	●	●	-

Right-Handed Insert Shown




● : Standard Stock

Double-sided 6-edge Insert, Low Cutting Force Cutter

MFWN Mini

MFWN's superior performance remains intact
Economical small diameter milling cutter



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	WNMU 050408EN-GM	●	●	●
 Low Cutting Force	WNMU 050408EN-SM	●	●	●
 Tough Edge (for Heavy Cutting)	WNMU 050408EN-GH	●	●	●

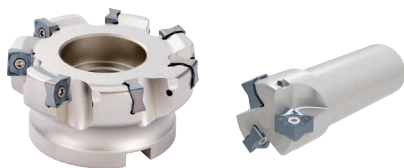
● : Standard Stock




Highly Efficient Cutter with a 88° Cutting Edge Angle

MFSN88

88° Cutting edge angle

Economical inserts with 8 cutting edges. Reduces chattering
with low cutting force design. Suitable for shoulder roughing



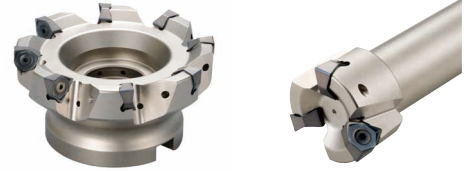
Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	SNMU 130508EN-GM	●	●	●
 Low Cutting Force	SNMU 130508EN-SM	●	●	●
 Tough Edge (for Heavy Cutting)	SNMU 130508EN-GH	●	●	●





● : Standard Stock

Double-sided 6-edge Insert, Low Cutting Force Cutter

MFWN

Economical double-sided 6-edge insert
Superior fracture resistance due to thick edge design



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 Surface Finish Oriented (Precision Class)	WNEU 080608EN-GL	●	●	●
 Tough Edge (for Heavy Cutting)	WNMU 080608EN-GH	●	●	●
 General Purpose	WNMU 080604EN-GM	●	●	●
	080608EN-GM	●	●	●
 Low Cutting Force	WNMU 080608EN-SM	●	●	●



● : Standard Stock

4-edge Face Mill with Vertical Inserts for Heavy Milling

MFLN90

Tough and reliable 4-edge vertical inserts for large
D.O.C. and high feed machining. Stable heavy milling



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 Corner-R	LOGU 221616ER-GM	●	●	—
 Corner Chamfer	LOGU 2216PAER-GM	●	●	—






● : Standard Stock

High-Efficiency Face Mill for Heavy Milling

MSRS90

Face mill for heavy milling. Notched insert reduced cutting force when entering the workpiece



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 3-Notched	SPMT 180616EN-NB3	–	●	●
 3-Notched/ Low cutting force	SPMT 180616EN-NB3P	–	●	●
 4-Notched	SPMT 180616EN-NB4	–	●	●
 4-Notched/ Low cutting force	SPMT 180616EN-NB4P	–	●	●
 Without notch	SPMT 180616EN-V	–	●	●






● : Standard Stock

High-Efficiency Face Mill for Heavy Milling

MSR

High-efficiency notched inserts provide low cutting force and suppress chatter. Improves machining efficiency in heavy milling with larger depth of cut.



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 3-Notched	APMT 250608ER-NB3	–	●	●
	250616ER-NB3	–	●	●
	250640ER-NB3	–	●	–
 4-Notched	APMT 250616EL-NB3	–	●	–
	APMT 250608ER-NB4	–	●	●
	250616ER-NB4	–	●	●
 3-Notched/ Low cutting force	250640ER-NB4	–	●	–
	APMT 250616EL-NB4	–	●	–
 3-Notched/ Low cutting force	APMT 250616ER-NB3P	–	●	●
 4-Notched/ Low cutting force	APMT 250616ER-NB4P	–	●	●

● : Standard Stock

45° Cutting Edge Angle Type

Facing





45° Cutting Edge Angle - New General Purpose Cutter

MB45

NEW

Delivers the "low cutting force" benefits of positive inserts and the "fracture resistance" benefits of negative inserts. Excellent surface finish



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	SNMU 1406ANER-GM	●	●	●
 Tough Edge	SNMU 1406ANER-GH	●	●	●
 General Purpose	SNEU 1406ANER-GM	●	●	●
 Low Cutting Force	SNEU 1406ANER-SM	●	●	-

Right-Handed Insert Shown

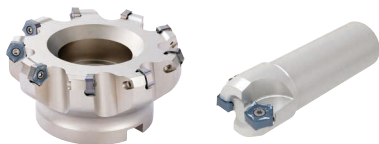
● : Standard Stock




Highly Efficient Cutter with a 66° Cutting Edge Angle

MFPN66

66° Cutting edge angle

Economical 10-edge insert. Reduces cutting costs when machining auto parts and other general purpose machining applications



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	PNMU 0905XNER-GM	●	●	●
 Low Cutting Force	PNMU 0905XNER-SM	●	●	●
 Tough Edge (for Heavy Cutting)	PNMU 0905XNER-GH	●	●	●

Right-Handed Insert Shown








● : Standard Stock

45° Face Mill with Double-sided 10-edge Inserts

MFPN45

Reduced chattering with low cutting force design and excellent fracture resistance. Economical 10-edge insert



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	PNMU 1205ANER-GM	●	●	●
 General Purpose	PNMU 1205ANEL-GM	●	●	●
 Low Cutting Force	PNMU 1205ANER-SM	●	●	●
 Tough Edge (for Heavy Cutting)	PNMU 1205ANER-GH	●	●	●
 Surface Finish Oriented (Precision Class)	PNEU 1205ANER-GL	●	●	●
 Surface Finish Oriented (Precision Class)	PNEU 1205ANEL-GL	●	●	●
 Wiper Insert (2-edge)	PNEU 1205ANER-W	●	●	●



● : Standard Stock

High Precision and High Efficiency High Rake Cutter

MFSE45

Rough and finish in 1 pass with excellent surface finish



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	SEET 13T3AGSN-GL	●	●	-
 Stainless Steel	SEET 13T3AGSN-SL	●	●	-

● : Standard Stock








High-Efficiency Face Mill for Heavy Milling

MSRS15

75° Cutting edge angle

Large depth of cut and high feed machining provide high efficiency machining. Max. D.O.C. is 12 mm



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 2-Notched	SPMT 1806EDER-NB2	●	●	●
 3-Notched	SPMT 1806EDER-NB3	●	●	●
 4-Notched/ Low cutting force	SPMT 1806EDER-NB2P	●	●	●
 5-Notched/ Low cutting force	SPMT 1806EDER-NB3P	●	●	●
 2-Notched/Tough edge	SPMT 1806EDSR-NB2T	-	●	●
 3-Notched/Tough edge	SPMT 1806EDSR-NB3T	-	●	●
 Without notch	SPMT 1806EDER-V	●	●	●


● : Standard Stock

4-edge Face Mill with Vertical Inserts for Heavy Milling

MFLN45/MFLN70

Tough and reliable 4-edge vertical inserts for large D.O.C. and high feed machining. Stable heavy milling



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 Corner-R	LOGU 221616ER-GM	●	●	-

● : Standard Stock





High Efficiency Multi-edge Cutter for Cast Iron

MFK

70° Cutting edge angle

Multi-edge cutter provides high efficiency in cast iron machining. Economical inserts with 10 cutting edges



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General purpose	PNMG 1106XNEN-GM	●	-	●
 Tough edge	PNMG 1106XNEN-GH	●	-	●
 Surface Finish Oriented	PNEG 1106XNEN-GL	●	-	●
 Wiper Insert (2-edge)	PNEG 1106XNER-W	●	-	●


● : Standard Stock

High Feed and Large Depth of Cut Milling

MFH Boost

High feed milling with larger depths of cut. Excellent performance in a wide range of applications, including automotive parts, difficult-to-cut materials, and molds



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	LOMU 040410ER-GM	●	●	●

Right-Handed Insert Shown


● : Standard Stock

Micro Dia. Cutter for High Feed Machining (Cutter Dia. ø8 – ø16)

MFH Micro

Low resistance and durable against chatter for highly efficient machining. Maximum ap 0.5 mm. Stable high feed machining on a wide range of applications



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	LPGT 010210ER-GM	●	●	-

Right-Handed Insert Shown



● : Standard Stock

Small Dia. Cutter for High Feed Machining (Cutter Dia. ø16 - ø50)

MFH Mini

Economical inserts with 4 cutting edges. Small Dia. fine pitch type for high efficiency and high feed machining



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	LOGU 030310ER-GM	●	●	●
 Tough Edge	LOGU 030310ER-GH	●	●	●

Right-Handed Insert Shown


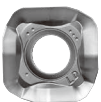

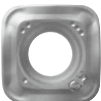
● : Standard Stock

Highly Efficiency and High Feed Cutter (Cutter Dia. ø25 - ø160)

MFH Harrier

Wide range of products for high feed machining
Large depths of cut and low cutting forces



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	SOMT 100420ER-GM	●	●	●
	140520ER-GM	●	●	●
 Large ap	SOMT 100420ER-LD	●	●	●
	140520ER-LD	●	●	●
 Wiper Insert	SOMT 100420ER-FL	●	●	●
	140514ER-FL	●	●	●
 Tough Edge	SOMT 100420ER-GH	●	●	●
	140520ER-GH	●	●	●

Right-Handed Insert Shown

● : Standard Stock

High-efficiency Radius Cutter with Multiple Edges

MRW

Economical double-sided 8-edge Inserts. Excellent sharpness and cutting edge strength, suitable for a wide range of workpiece materials






Low-Cutting-Force and High-Efficiency Radius Cutter

MRX







Excellent cutting performance due to low cutting force design
High-efficiency radius cutter



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General purpose	ROMU 1204M0ER-GM	●	●	●
	1605M0ER-GM	●	●	●
 Low cutting force	ROMU 1204M0ER-SM	●	●	—
	1605M0ER-SM	●	●	—
 Tough edge (for heavy milling)	ROMU 1204M0ER-GH	●	●	●
	1605M0ER-GH	●	●	●

Right-Handed Insert Shown

● : Standard Stock

Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
 General Purpose	RDGT 0803M0ER-GM	●	●	●
	RPGT 10T3M0ER-GM	●	●	●
	1204M0ER-GM	●	●	●
 General Purpose	RDGT 1605M0ER-GM	●	●	●
	RDMT 0803M0ER-GM	●	●	●
	RPMT 10T3M0ER-GM	●	●	●
 General Purpose	1204M0ER-GM	●	●	●
	1605M0ER-GM	●	●	●
	RDGT 0803M0ER-SM	●	●	—
 Low Cutting Force	RPGT 10T3M0ER-SM	●	●	—
	1204M0ER-SM	●	●	—
	1605M0ER-SM	●	●	—
 Tough Edge (for Heavy Cutting)	RDMT 0803M0EN-GH	●	●	●
	RPMT 10T3M0EN-GH	●	●	●
	1204M0EN-GH	●	●	●
 Tough Edge (for Heavy Cutting)	1605M0EN-GH	●	●	●

Right-Handed Insert Shown



● : Standard Stock

Other Inserts for Milling

Multi-function End Mill

MEY

Multi-function machining (Drilling/Ramping/Shouldering/Grooving). Full 2-insert structure and high stability


Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
	GOMT 08T208ER-D	●	–	●
	100308ER-D	●	–	●
	13T308ER-D	●	–	●
	160408ER-D	●	–	●
	JOMT 08T208ER-D	●	–	●
	100308ER-D	●	–	●
	13T308ER-D	●	–	●
	160408ER-D	●	–	●

● : Standard Stock

T-Slot Mill

METS

For T-slotting. Recommended for high feed machining with 2 flute design. Economical 4-edge insert



Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
	SDMT 060304E-K	–	●	●
	080308E-K	–	●	●
	120408E-K	–	●	●

● : Standard Stock

Chamfering End Mill

MCSE

For 30°, 45°, 60° chamfering. Economical 4-edge insert

Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
	SDKW 09T204TN	●	–	–
	SEKW 120304TN	●	–	–
	120308TN	●	–	–
	SDMT 09T204C	●	–	–
	SEMT 120304C	●	–	–


Low cutting force

● : Standard Stock

Bolt Countersink End Mill

MEF

Countersink for hexagon socket bolt (M6 ~ M30). Economical 4-edge insert

Shape	Description	MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
	SPMT 060204E-Z	●	–	●
	060208E-Z	●	–	●
	090304E-Z	●	–	●
	090308E-Z	●	–	●

● : Standard Stock

ISO Standard Inserts for Milling

Description		MEGACOAT NANO EX		
		PR1825	PR1835	PR1810
SDMR	1203AUER-H	●	–	–
SEMR	1203AFER-H	●	–	–
SPEN	1203EESR	–	–	●
SPMR	1203EDER-H	●	–	–
TEMR	1603PTER-H	●	–	–
TEMR	2204PTER-H	●	–	–
TPMR	1603PDER-H	●	–	–
TPMR	2204PDER-H	●	–	–
RDHX	0702M0T	–	●	–
RDHX	1003M0T	–	●	–
RDHX	12T3M0T	–	●	–
RDMT	08T2M0-H	–	●	●
RPMT	10T3M0	–	●	●
RPMT	1204M0	–	●	●
RPMT	1204M0-H	–	●	●
RPMT	1606M0-H	–	●	●
RPMT	2006M0-H	–	●	●
SDMT	1204AESR-H	●	–	–

● : Standard Stock

Up to 2.5 times longer tool life than conventional tools
Delivers excellent performance with a wide variety of cutters



Case Studies

Mechanical parts S45C

Vc = 160 m/min
ap = 1.0 mm
fz = 0.15 mm/t
Wet
MA90-25S20-09T3C
LOGU090408ER-GM



Number of parts

PR1825

15 pcs/corner

2.5x
Tool life

Conventional C 6 pcs/corner

Proprietary insert shape suppresses wear progression of main cutting edge and wiper edge
Provides superior surface finish and 2.5x longer tool life

(User evaluation)

Housing SUS316

Vc = 90 m/min
ap = 2.0 mm
fz = 0.18 mm/t
Dry
MB45-063R-14T5C-M
SNMU1406ANER-GM



Number of parts

PR1825

30 pcs/corner

1.6x
Tool life

Conventional D 18 pcs/corner

Unique low cutting force wiper edge design reduces chattering
Shows 1.6x longer tool life

(User evaluation)

General machine parts FCD450

Vc = 120 m/min
ap = 1.0 mm
fz = 0.19 mm/t
Dry
MFWN90080R-S32-5T
WNNMU080608EN-GM



Number of parts

PR1825

65 pcs/corner

1.6x
Tool life

Conventional E 40 pcs/corner

Shows stable machining without insert fracture
Shows 1.6x longer tool life

(User evaluation)

Mechanical parts SCM420

Vc = 130 m/min
ap = 13.0 mm
fz = 0.07 mm/t
Wet
MECH025-S25-11-4-2T
BDMT11T308ER-N2/N3



Number of parts

PR1825

6 pcs/corner

(Cutting distance : 38.1 m)

1.5x
Tool life

Conventional F 4 pcs/corner

(Cutting distance : 25.4 m)

Good cutting edge condition in heavy machining with large D.O.C.
1.5x longer tool life

(User evaluation)

Mold parts Plastic mold steel

Vc = 120 m/min
ap = 0.3 mm
fz = 1.3 mm/t
Wet
MFH25-S25-03-5T
LOGU030310ER-GM



Number of parts

PR1835

150 pcs/corner

2.5x
Tool life

Conventional G 60 pcs/corner

Stable machining without chatter even in high-feed machining
Maintains good cutting edge condition and achieves 2.5x longer tool life

(User evaluation)

Body parts FC250

Vc = 360 m/min
ap = 0.35 mm
fz = 0.08 mm/t
Wet
MFPN45100R-8T
PNMU1205ANER-GH



Number of parts

PR1810

200 pcs/corner

2x
Tool life

Conventional H 100 pcs/corner

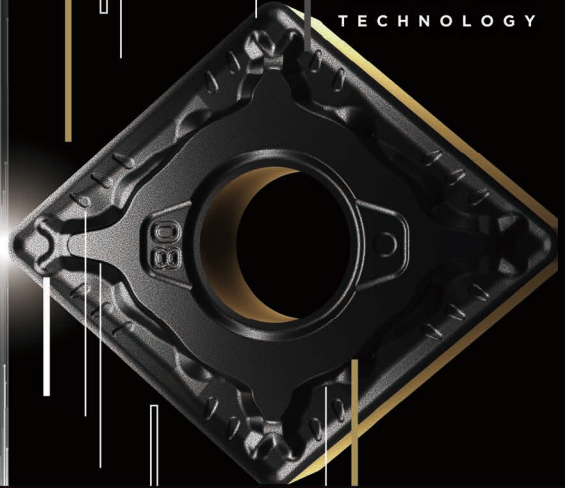
Improved tool life and 10 corners on both sides for significant cost savings

(User evaluation)

C
V
D

Chemical Vapor Deposition

CVD
TECHNOLOGY



Achieving Unprecedented Tool Life



P
V
D
Physical Vapor Deposition

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