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YG-1 PRODUCTS!!
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INSERT HIGHLIGHT

YG-1 CO., LTD.

HEAD OFFICE

13-40, Songdogwahak-ro 16beon-gil, Yeonsu-gu, Incheon 21984, South Korea

Notice YG-1 Global head office is relocating from December 2020 to a new address as above;

Phone: +82-32-526-0909

<https://www.yg1.kr> E-mail: yg1@yg1.kr

Note The new address above has currently been updated to the new Korean postal standard valid since 2014.
Notice that the physical Head Office location did NOT change.

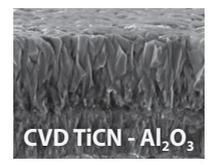
Search 'YG-1' on social media outlets





YGTURN
YG1010 for Automotive Industry

YG1010 Turning Grade for Cast Iron **K**



YG1010 **K05 - K15**
First Choice for Cast Iron

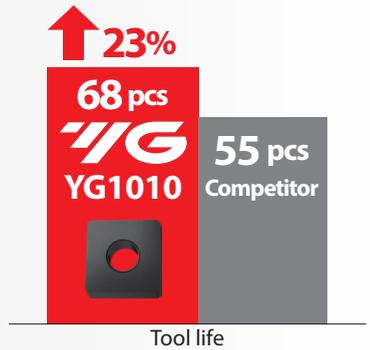
Features

- Excellent surface finish
- Longer tool life
- Very stable performance
- Can cover both continuous cut and interrupted cut
- Effective coating structure enables high speed machining
- Special post treatment for improved chipping resistance

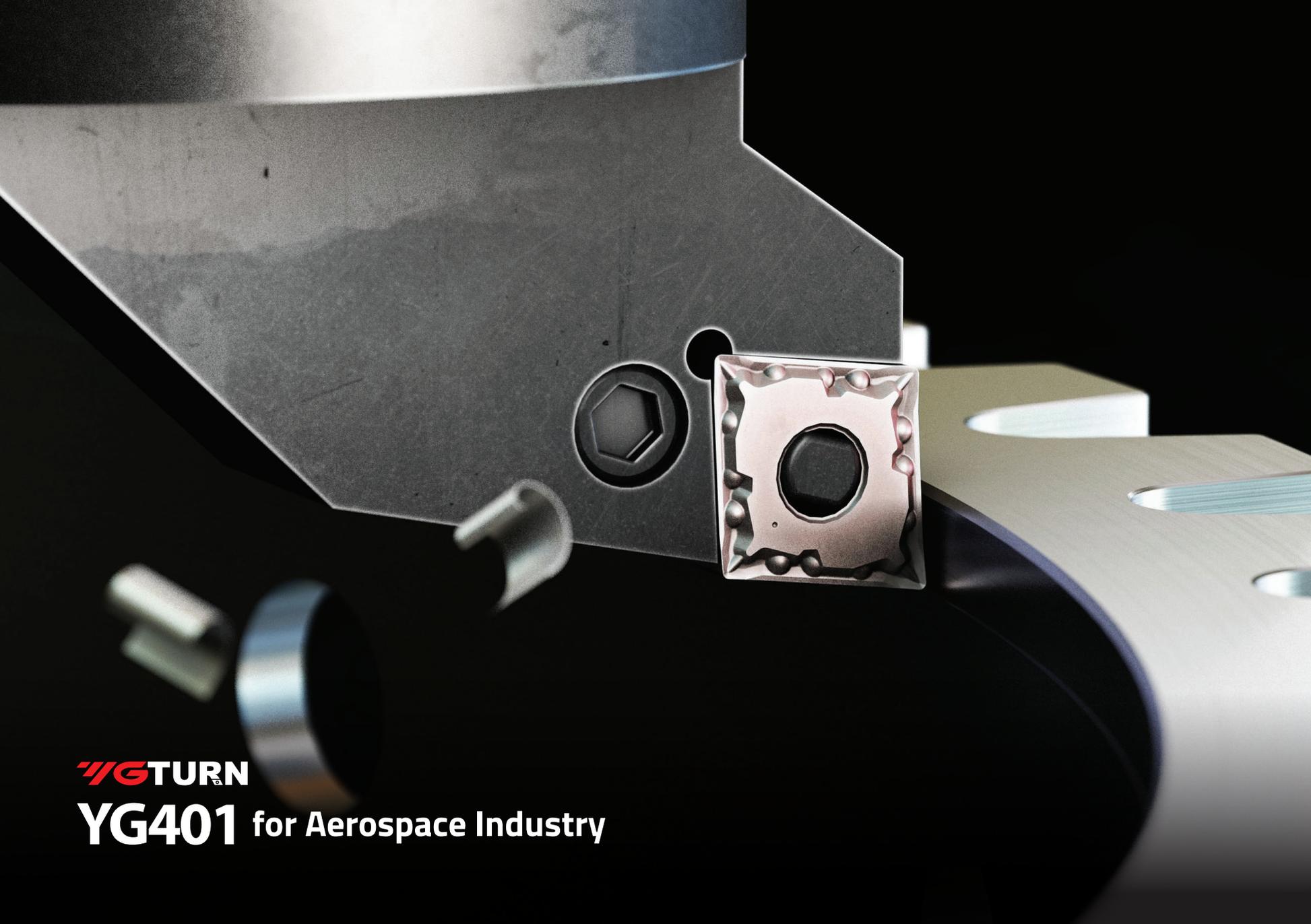
Grey Cast Iron
 AISI 40B
 JIS FC250
 DIN 0.6025

SNMA120412-YG1010

Vc 185 m/min.
 (607 ft/min.)
 Fn 0.10 mm/rev.
 (.004 inch/rev.)
 Ap 2.0 mm
 (.079 inch)

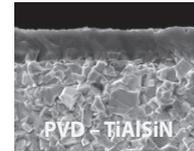


Inserts Type	Chip Breaker	Edge Shape	Work-Piece shape
UG		First choice for medium (stable application) 20° 6° 0.23	Continuous cut ↑ Interrupted cut ↓
UC		Medium roughing and first choice for cast iron 14° 0.2	
UR		Roughing and heavy interrupted cut 17° 0.35	
KR		Cast iron heavy roughing 19° 0.50	
.MA		Cast iron heavy roughing	
Positive UG		Medium application 17° 0.15	Continuous cut & Interrupted cut



YGTURN
YG401 for Aerospace Industry

YG401 Turning Grade for HRSA & Stainless steel **S M** **YGTURN**



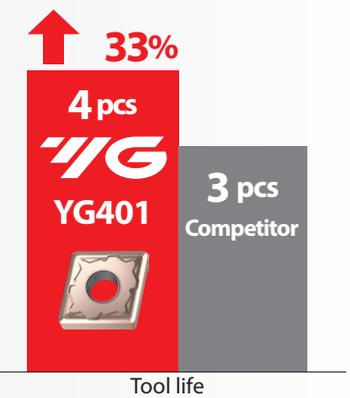
YG401 **S10 - S20** **M15 - M30**
 For HRSA (Heat Resistant Super Alloy) & Stainless steel

Features

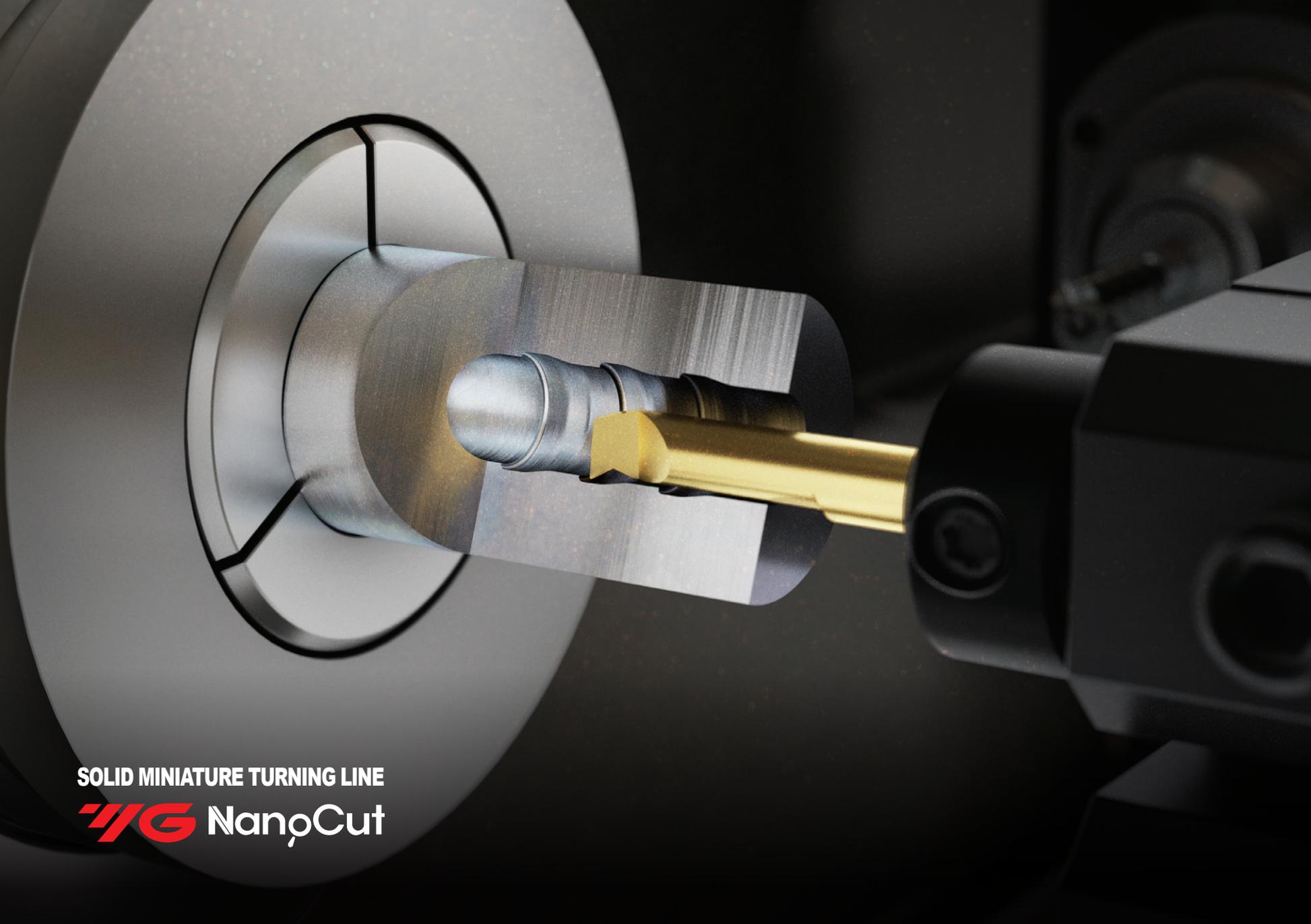
- Greatly improved adhesion realizes excellent boundary defect resistance
- Top coating layer provides a smooth surface and lubricant effect
- Ultra-fine grained carbide with a balanced substrate
- Heat resistant TiAlSiN structure realizes excellent crater and flank wear resistance

Inconel 718
 DIN 2.4668

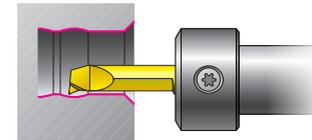
CNMG120408-SM-YG401
 Vc 61 m/min.
 (200 ft/min.)
 Fn 0.28 mm/rev.
 (.011 inch/rev.)
 Ap 1.90 mm
 (.075 inch)



Chip Breaker	Edge Shape	Work-Piece shape
SF	For finishing ground insert 20°	
MF	For finishing very high positive rake angle 18°	
SM	For medium positive rake angle 15°	
MM	For medium excellent chip breaking 19° 12° 0.17	
MG	Tough cutting edge shape excellent performance 10° 0.27	
SR (MR)	For roughing very tough cutting edge 8° 0.40	

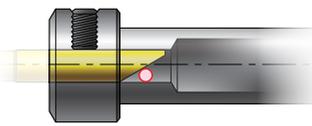


Solid Miniature Turning for Small Bore



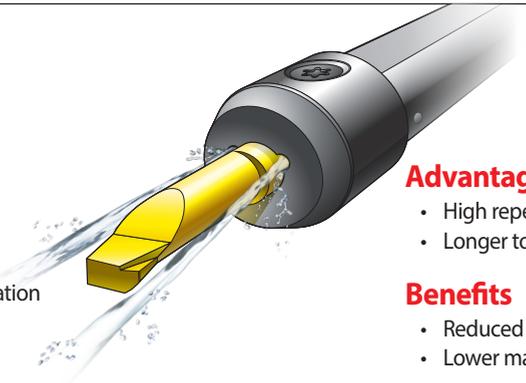
Application

- Turning of small bore components
- Internal turning (boring), grooving and threading



Features

- Minimum diameter (boring & profiling series) : ϕ 1 mm (.039")
- Internal coolant for longer tool life and enhanced chip evacuation
- Secure connection design: pin + slant positioning
- 9 Geometries for various applications

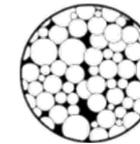


Advantages

- High repeatability
- Longer tool life

Benefits

- Reduced machine down time
- Lower machining cost



YG812 - Micro Grain Carbide Grade

P10 - P20	M20 - M30	Submicron Grade Carbide Substrate Material for high toughness and wear resistance realizes high precision machining
K20 - K30	S10 - S25	



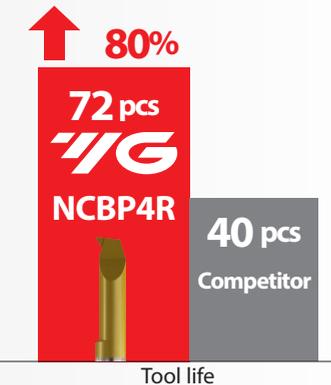
Scan this QR code to see our NanoCut at work.

Austenitic Stainless Steel

AISI 630
 JIS SUS630
 DIN 1.4542

NCBP4R-42.25-015-YG812

Vc 30 m/min.
 (98 ft./min.)
 Fn 0.01 mm/rev.
 (.0004 inch/rev.)
 Ap 0.10 mm
 (.004 inch)



Target Industry & Component

Hydraulic and Pneumatic Fitting Industry		Brass Fitting and Sensor Housing	
Spark Plug Housing		Glow Plug Housing used in Diesel	
Lube Nipples in Auto Parts		Automotive Valve Guide	
Watch Components (Screw, Case etc.)		Medical - Dental Implant, Orthopedic bone screw	



YG GROOVE

Double Sided 6° Angled Parting Insert

Double Sided 6° Angled Parting Insert

YG GROOVE

Angled Parting off Tool

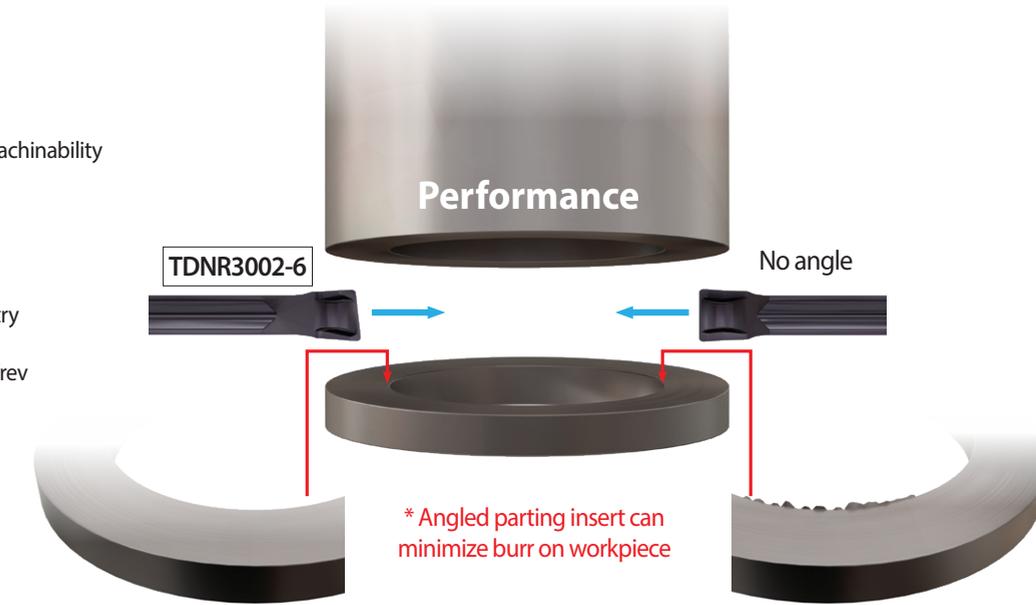
New double sided 6degrees angled parting insert
 For pipes, small components and solid bar
 Minimized burrs on the work piece reduced cutting force with improved machinability



TDN type
 Strong Geometry
 Medium Feed
 0.07~0.22 mm/rev



TDP type
 Strong Geometry
 Low Feed
 0.05~0.16 mm/rev



Non-alloy Steel

AISI 1045
 JIS S45C
 DIN 1.0503

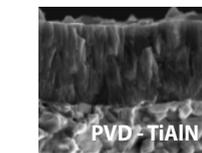
TDNL3002-6-YG602

Vc 136 m/min.
 (446 ft./min.)
 Fn 0.04 mm/rev.
 (.002 inch/rev.)
 Ap 18.00 mm
 (.709 inch)

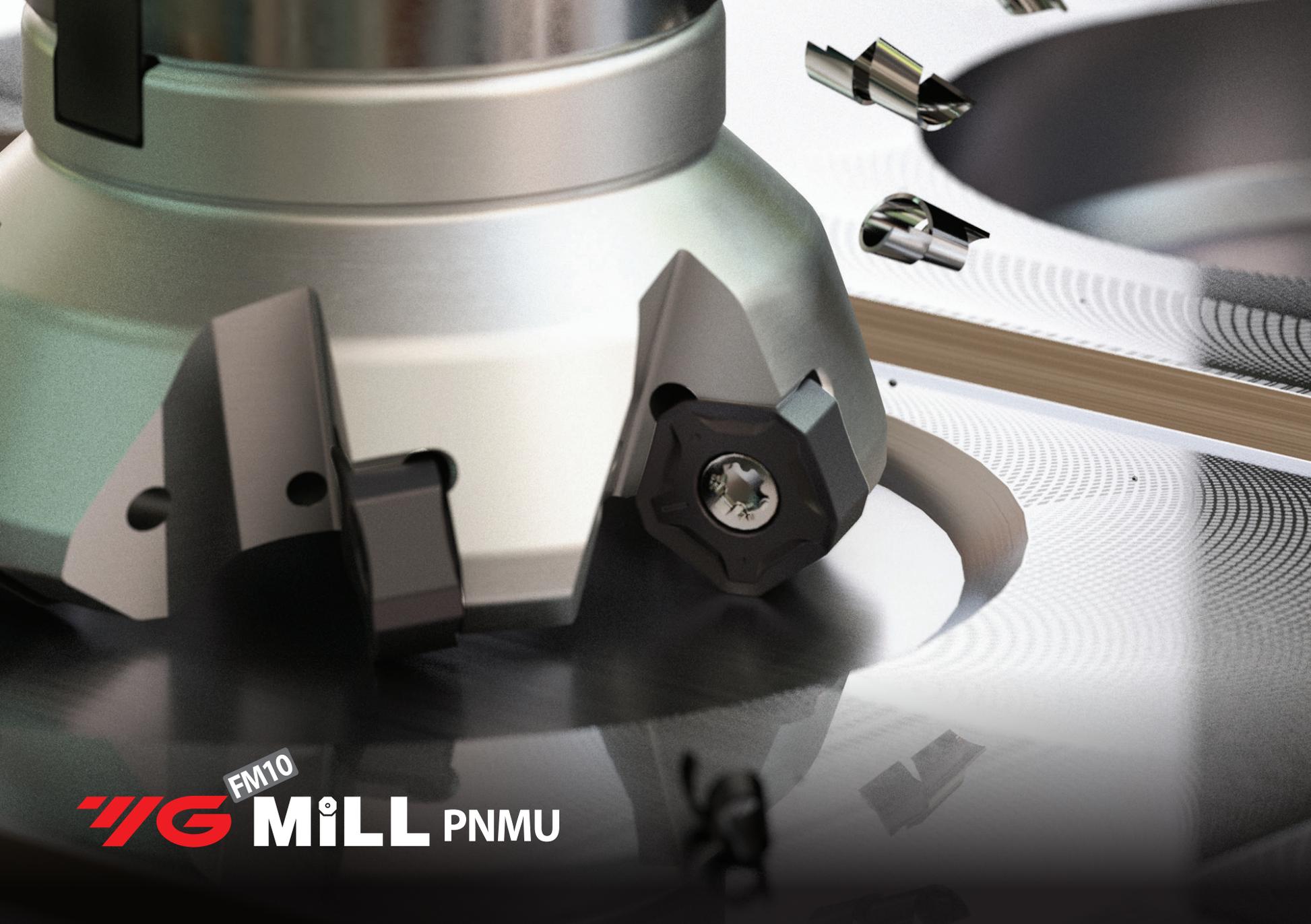


YG602(G) P20 - P35 M20 - M40 K20 - K40 S15 - S25

Universal grade for Parting & Groove Turn



- Ultra Dense PVD Coating with optimal thermal resistance & strength
- Sub-Micron substrate designed for demanding application
- YG602 : First choice for general application
- YG602G : First choice for low cutting speed, soft and sticky material with low hardness



FM10 YG MILL PNMU



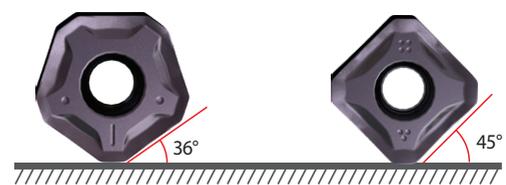
10 Cutting Edges Negative Face Milling Insert

For face milling
 10 cutting edges with a 36° entry angle
 Higher productivity and stable cutting performance.

Features

- Economical pentagonal double sided 10 cutting edges insert
- Higher depth of cut than high feed mill and higher feed rate than conventional face mill.
- High Versatility with optimized grades

Entry Angle Comparison



Entry Angle 36°
 - High Feed rate
 - Small Depth of Cut
 - 10 Corner Insert

Entry Angle 45°
 - Low Feed rate
 - Big Depth of cut
 - 8 Corner Insert



Scan this QR code to see our YG FM10 Mill at work.

Low Alloy Steel
 AISI 4140
 JIS SCM440
 DIN 1.7225

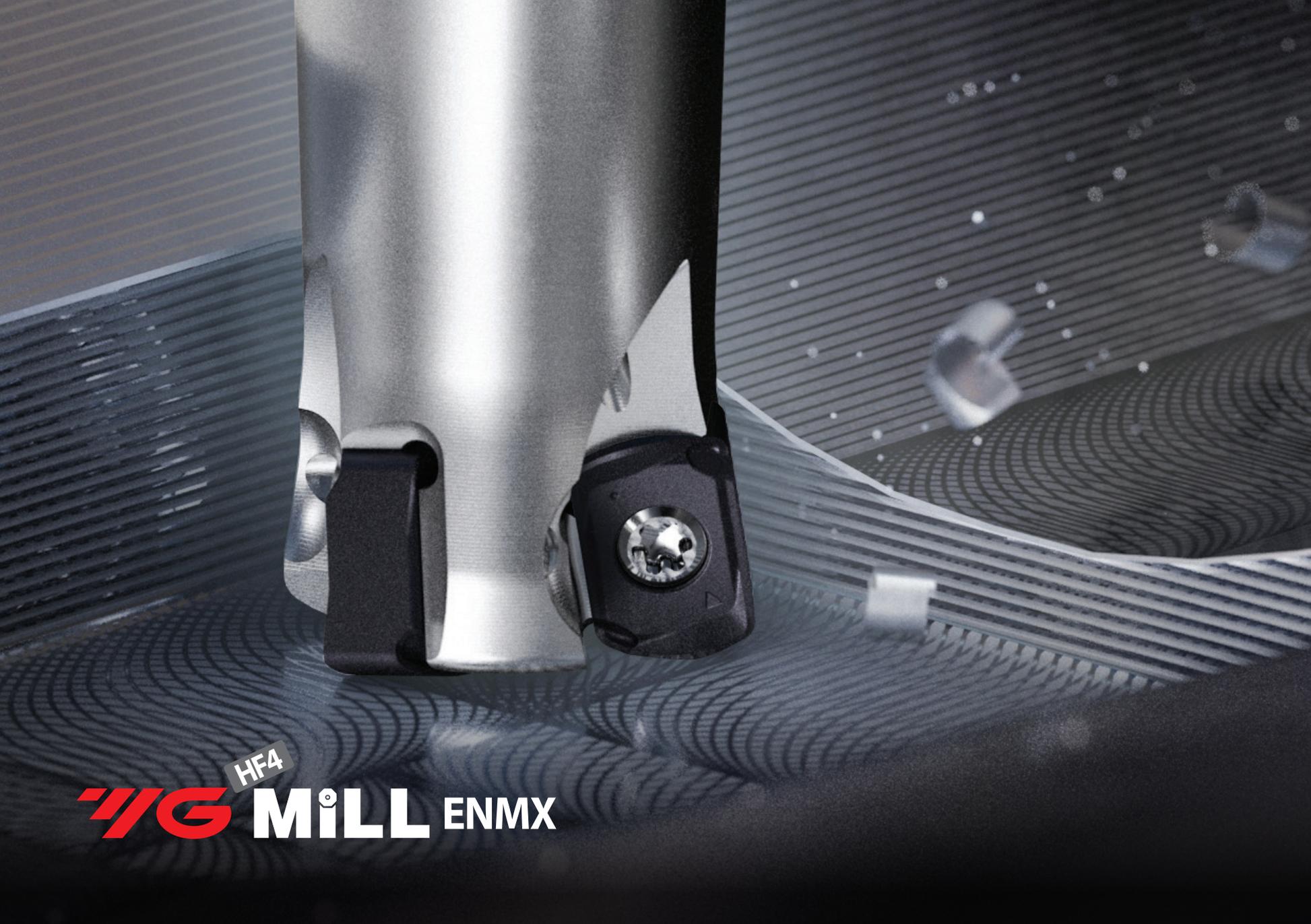
PNMU1206ZNN-YG712

	YG1	Competitor
Vc	200 m/min. (656 ft./min.)	
Vf	1,250 mm/min. (49.21 inch/min.)	800 mm/min. (31.50 inch/min.)
Ap	1.00 mm (.040 inch)	
Metal Removal Rate(Q)	100 cm ³ /min. (6.10 inch ³ /min.)	80 cm ³ /min. (4.88 inch ³ /min.)

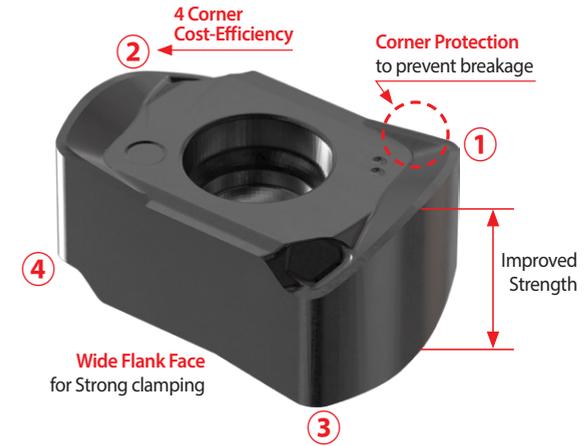
↑ Productivity 56%
↑ Tool life 13%

188 pcs
YG PNMU
166 pcs
 Competitor

FM10 YG MILL PNMU



4 Corner Negative High Feed Milling Insert



Application

- High feed milling, profiling, face milling, ramping, plunging, helical interpolation

Features

- Diameter range : 16~125mm (.625"~6")
- Double-sided insert with 4 corners
- Wide flank face with reinforced insert shape
- Positive rake angle & low entering angle
- 3 Insert geometries



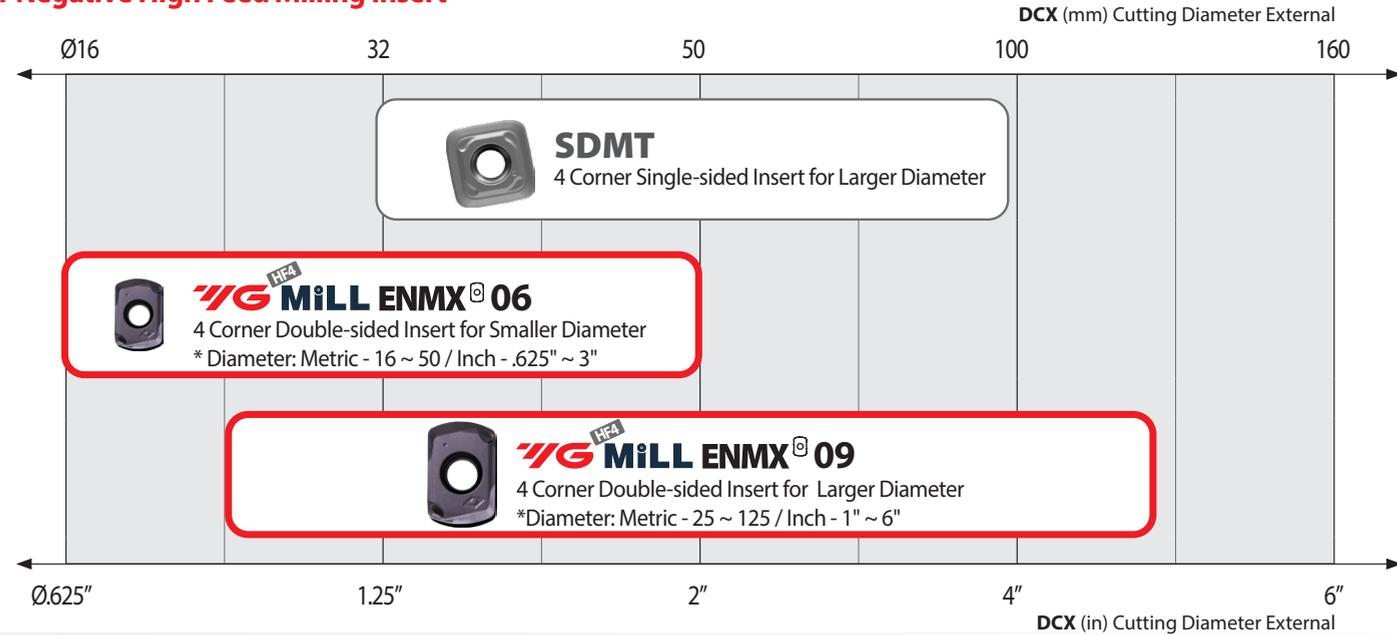
Advantages

- Narrow application available (minimum ø16)
- High versatile machining
- High cost-efficiency
- Rigid clamping on insert seat
- Prevent breakage on machining
- High feed rate available with low cutting force

Benefits

- Expand machining ability with high versatility & small diameter ability
- Boost up productivity with high feed rate
- Safe machining with rigidity and strong insert shape

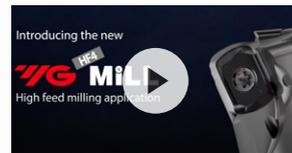
4 Corner Negative High Feed Milling Insert



High Alloyed Steel
AISI H13
JIS SKD61
DIN 1.2344

ENMX0905-TR-YG602

Vc 170 m/min.
(558 ft./min.)
Fz 0.50 mm/min.
(.020 inch/min.)
Ap 0.50 mm
(.020 inch)



Scan this QR code to see our YG HF4 Mill at work.

Indexable Drilling Inserts



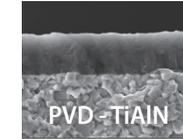
WCMX Series

Popular 3 corner drill insert
WCMX 03/04/05/06/08
Diameter Ø 16mm ~ Ø 60mm



SPMX Series

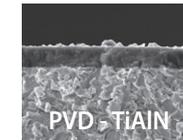
Economic 4 corner drill insert
SPMX 05/06/07/09/11/14
Diameter Ø 13mm ~ Ø 50mm



YG602

P20 - P35 M20 - M40
K20 - K40 S15 - S25

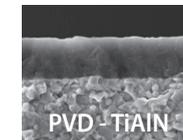
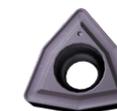
Multi-Purpose Grade



YG713

P15 - P25

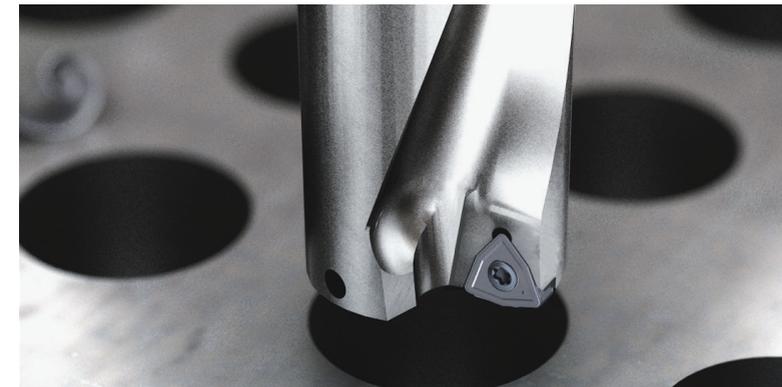
Drilling Grade for General Steel Application



YG613

P30 - P50 M30 - M50

Drilling Grade for Stainless Steel Application



Low Alloy Steel
AISI 1045
JIS S45C
DIN C45E

WCMX 06T308, YG602

Vc 120 m/min
(400 ft/min)
Fz 0.12 mm/tooth
(.005 in/tooth)

