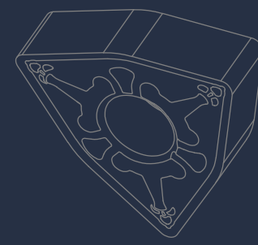
天工硬质合金
TIANGONG CEMENTED CARBIDE

New Product Brochure
新品产品册



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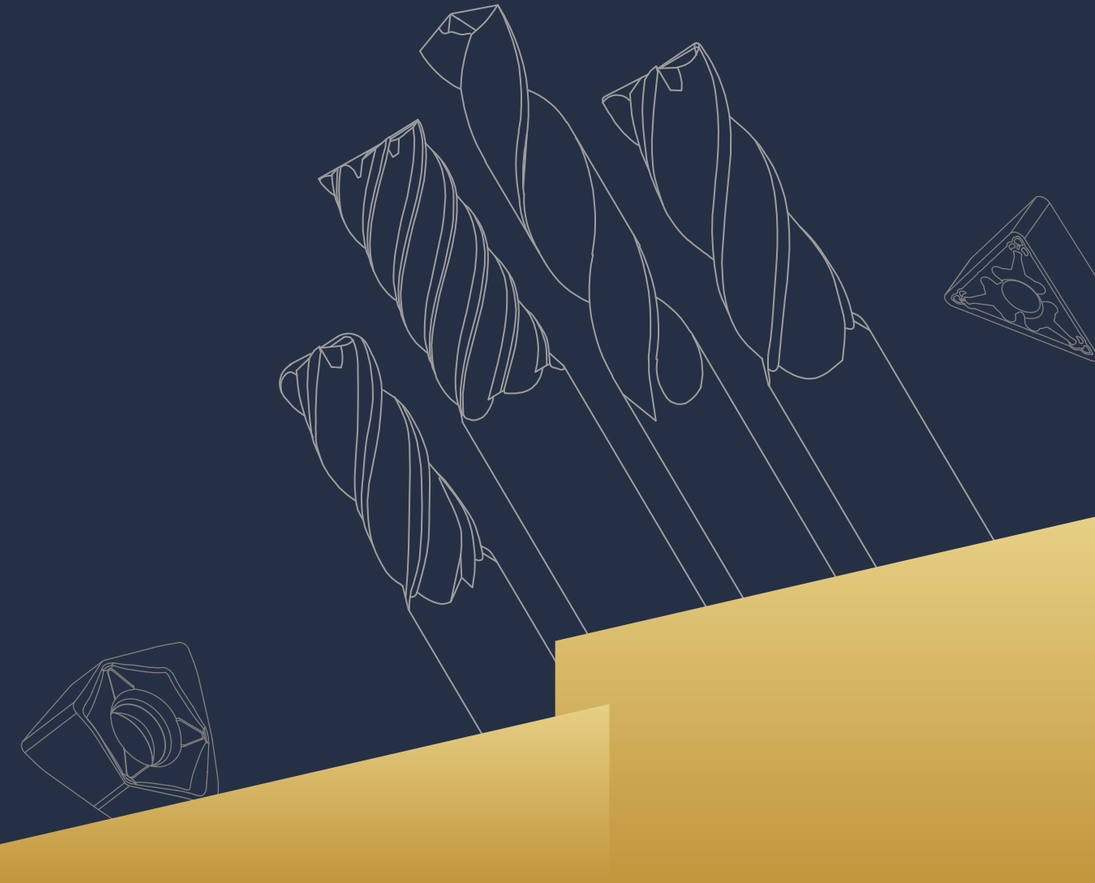

江苏天工硬质合金科技有限公司
Jiangsu Tiangong Cemented Carbide Technology Co., Ltd.

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公司简介
About TG

研发 R&D　生产 Production　制造 Manufacture　营销 Marketing　服务 Service

一流团队 专业技术研发团队，完整硬质合金生产链
professional technology R&D team, a complete cemented carbide production chain.

尖端设备 国内外先进/行业顶尖的研发及生产设备
R&D and production equipments are advanced at home and abroad.

江苏天工硬质合金科技有限公司成立于2021年，隶属于天工国际有限公司，是一家专注硬质合金棒料、整体硬质合金刀具、可转位刀具及数控刀片的专业制造商。

公司具备一支高素质的专业技术研发团队，拥有一条完整的硬质合金生产链，各工序骨干技术人员均有多年岗位工作经验；研发及生产设备均为国内外先进或行业顶尖水平，满足各类硬质合金产品研发生产需求；生产工艺及方法均为数字化并与生产设备互联，以确保产品品质稳定。

母公司天工国际有限公司成立于1981年，是中国重点发展先进基础材料、关键战略材料、前沿新材料及精密切削刀具生产制造商，于2007年在香港联交所主板上市，是国家重点高新技术企业，中国民营企业制造业500强，中国五金工具出口质量安全示范企业，世界工模具钢强企前两强。建有中国首条工模具钢及钛合金粉末冶金工业化生产线，为刀具生产提供可靠的原材料支撑。

我司致力于在3C电子、模具、通用机械、汽车、航空航天及军工等行业领域为客户提供专业的整体解决方案和完善服务，一切以产品质量及服务质量为先。公司秉承“一切从诚信做起”的经营理念，与客户互利共赢，携手共进。

Jiangsu Tiangong Cemented Carbide Technology Co., Ltd. was established in 2021 and is affiliated to Tiangong International Co., Ltd. It is a professional manufacturer, focusing on cemented carbide rods, cemented carbide cutting tools and indexable inserts.

The company has a high-quality professional technology research and development team, a complete carbide production chain; The backbone technicians of each process have many years of work experience;R&D and production equipment are domestic and foreign advanced or industry top level. They meet the development and production needs of all kinds of cemented carbide products. Production processes and methods are digitized and connected to production equipment, to ensure stable product quality.

Parent company Tiangong International Co., Ltd. was established in 1981. It is a manufacturer that focus on the development of advanced basic materials, key strategic materials, cutting-edge new materials and precision cutting tool manufacturers. TG International was listed on the Main Board of the Hong Kong Stock Exchange in 2007. It is a national key high-tech enterprise, China's top 500 private enterprises in manufacturing, China hardware tools export quality safety demonstration enterprises and the world's top two tool steel enterprises. TG International has China's first industrial production line of die steel and titanium alloy powder metallurgy, provide reliable raw material support for tool production.

Our company is committed to providing customers with professional overall solutions and perfect services in 3C electronics, molds, general machinery, automobiles, aerospace, military industries and other industries. All to product quality and service quality first. The company adheres to the business philosophy of "everything starts from integrity", and works together with customers for mutual benefit and win-win results.

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产品信息 Tools and Cutting Data

天工硬质合金
TIANGONG CEMENTED CARBIDE

整体硬质合金刀具
Solid Carbide Cutting Tools

天工硬质合金 TIANGONG CEMENTED CARBIDE

材料组 Material grouping	经济型 Economical	通用加工 General machining	高速加工 High-speed machining	高效加工 High performance machining	微加工 Micro machining	粗加工 Roughing
P 碳钢、合金钢、预硬钢（≤HRC48） Carbon steel, Alloy steel, Prehardened steel（≤HRC48）	P10 钢材普通加工系列 Series economical endmill for steel general machining	P20 钢材通用加工系列 Series endmill for steel general machining	P30 钢材高速加工系列 Series endmill for steel high-speed machining	P40 钢材高效加工系列 Series endmill for steel high performance machining	P50 钢材微加工系列 Series endmill for steel micro machining	P60 钢材粗加工系列 Series endmill for steel roughing
M 不锈钢 Stainless steel		M20 不锈钢通用加工系列 Series endmill for stainless steel general machining	M30 不锈钢高速加工系列 Series endmill for stainless steel high-speed machining	S40 不锈钢高效加工系列 Series endmill for stainless steel high performance machining		
N 石墨 Graphite			G30 石墨高速加工系列 Series endmill for graphite high-speed machining			
N 铝合金、铜合金 Aluminum alloy Copper alloy	A10 铝合金普通加工系列 Series economical endmill for aluminum alloy general machining		A30 铝合金高速加工系列 Series endmill for aluminum alloy high-speed machining	A40 铝合金高效加工系列 Serirs endmill for aluminum alloy high performance machining		A60 铝合金粗加工系列 Series endmill for aluminum alloy roughing
S 高温合金 HRSA(Heat resistance super alloy)			产品即将上新 To be launched	S40 高温合金高效加工系列 Series endmill for HRSA high performance machining		
S 钛合金 Titanium alloy			产品即将上新 To be launched	T40 钛合金高效加工系列 Series endmill for titanium high performance machining		产品即将上新 To be launched
H 高硬材料（HRC45-65） Hardened material(HRC45-65)		H20 高硬钢通用加工系列 Series endmill for hardened steel(≤HRC 52) general machining	H30 高硬钢高速加工系列 Series endmill for hardened steel high-speed machining	H40 高硬钢高效加工系列 Series endmill for hardened steel high performance machining	H50 高硬钢微加工系列 Series endmill for hardened steel micro machining	

P10钢材经济型立铣刀
P10 Economical Endmill of Steel

◎ 产品特点 Product Feature

◎ 采用经济型硬质合金基体
Economical cemented carbide substrate is adopted

◎ One pass槽型设计优异排屑性能
One pass groove design Excellent chip removal performance

◎ 周刃圆弧铲磨后角设计,良好的刀具刃口强度
Eccentric relief design, great cutting edge strength

◎ 含Si的古铜色涂层,良好的刀具耐磨性
Bronze coating with Si
The wearability of tool is great

◎ 应用特点 Application Feature

被加工材料——适合用于普通钢(≤HRC35)、铸铁等材料的通用加工
Processed material——Suitable for general processing of normal steel (≤HRC35), cast iron and other materials

应用行业——适合用于模具、通用机械等行业
Application industry——Suitable for industries of die and mold, general machinery and so on

推荐加工参数——线速度:50-120m/min； 加工方式:侧铣、面铣等
Recommended machining parameter——Cutting speed:50~120m/min;Processing method:side milling, face milling

P20钢材通用加工立铣刀
P20 General Processing Endmill of Steel

◎ 产品特点 Product Feature

◎ **兼具耐磨性及韧性**
Both wearability and toughness
钴含量10%的亚微细硬质合金基体
10% Co submicron cemented carbide substrate

◎ **良好耐磨性及高温抗氧化性**
Great wearability and high temperature oxidation resistance
含Si的AlCr系涂层
Contain Si AlCr coating

◎ **兼具锋利性及刃口强度**
Both sharpness and edge strength
大螺旋角设计,保证锋利性;
特殊前后角设计,保证刃口强度及耐磨性
Large helix angle design ensures sharpness
Special rake and clearance angle design ensures cutting edge strength and wearability

◎ 应用特点 Application Feature

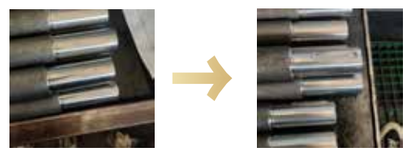
被加工材料——适用于普通钢(≤HRC48)、铸铁等材料的通用加工
Processed material——Suitable for general processing of normal steel (≤HRC48), cast iron and other materials

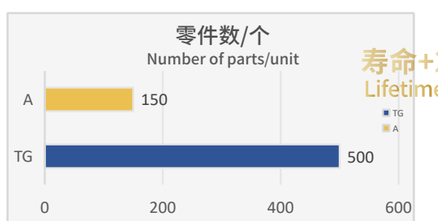
应用行业——适合用于模具、汽车、航空、通用机械等各个行业
Application industry——Suitable for various industries of die and mold,automobile,aerospace, general machinery and so on

推荐加工参数——线速度:50～250m/min;加工方式:面铣、侧铣、槽铣等多种方式
Recommended machining parameter——Cutting speed:50~250m/min;Processing method:face milling,side milling,slot milling…

◎ 应用案例 Application Feature

刀具型号 Tool Model	P20-S4-6-15-6-50
刀具规格 Tool Specification	D6*15*50*d6*4F
加工材料 Processing Material	20CrMnTi(HB156-197)
切削速度 Cutting Speed	2500 rpm (47 m/min)
进给速度 Feed Speed	45mm/min(0.0045mm/z)
切削方式 Cutting Mode	侧铣（内侧壁精加工） Side milling(finish machining for medial wall)
切深量 Depth of Cutting	ap=4mm，ae=0.1mm
冷却方式 Type of Cooling	水基乳化液 water-based emulsion
切削效果 Cutting Result	我司刀具可加工500个工件 对手仅能加工150个工件 TG can process 500 workpieces, but the competitor can just process 150 workpieces.

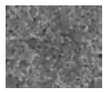




P30钢材高速加工立铣刀
P30 High Speed Processing Endmill of Steel

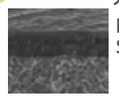
◎ 产品特点 Product Feature

◎ 独特的基体材质设计，兼具耐磨性及抗冲击性
Special substrate material design, have both wearability and impact resistance

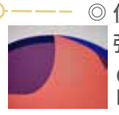


◎ 先进的刃口磨削技术，刀具性能优异
Advanced cutting edge grinding technology, great tool performance

◎ 全新升级含Si的AlCr系涂层，刀具使用寿命长
New upgrade AlCr coating with Si, long tool lifetime



◎ 优化几何角度设计，刀具刃口强度高
Optimize geometric angle design, high cutting edge strength



◎ 应用特点 Application Feature

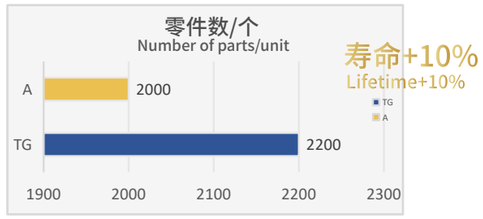
被加工材料——适用于普通钢（≤HRC48）、铸铁、不锈钢（<HB280）等材料的高速加工
Processed material——Suitable for high speed processing of normal steel（≤HRC48）, cast iron, stainless steel(＜HB280） and other materials

应用行业——适合用于模具、汽车、3C、航空、通用机械等各个行业
Application industry——Suitable for various industries of die and mold,3C,automobile,aerospace, general machinery and so on

推荐加工参数——线速度：40～200m/min;加工方式：面铣、侧铣、槽铣等多种方式
Recommended machining parameter——Cutting speed:40~200m/min;Processing method：face milling,side milling,slot milling…

◎ 应用案例 Application Feature

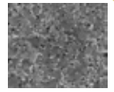
刀具型号 Tool Model	P30-S4-8-20-8-60
刀具规格 Tool Specification	D8*20*60*d8
加工材料 Processing Material	SAE8617H (≤HRC30)
切削速度 Cutting Speed	1300rpm (32.7 m/min)
进给速度 Feed Speed	250mm/min(0.048mm/z)
切削方式 Cutting Mode	侧铣（内侧壁精加工） Side milling(finish machining for medial wall)
切深量 Depth of Cutting	ap=8mm，ae=0.5mm
冷却方式 Type of Cooling	水基乳化液 water-based emulsion
切削效果 Cutting Result	相同工况下，我司刀具加工2200个零件，对手加工2000个零件 Under the same working condition，TG can process 2200 workpieces, but the competitor can just process 2000 workpieces



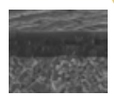
P40钢材高效加工立铣刀
P40 High Performance Processing Endmill of Steel

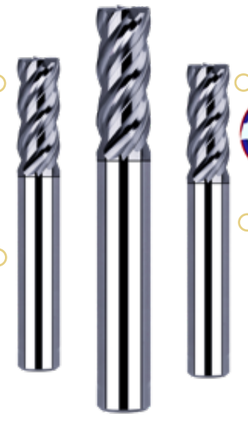
◎ 产品特点 Product Feature

◎ 高抗冲击性
High impact resistance
亚微细硬质合金基体
Submicron cemented carbide substrate



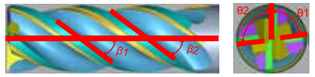
◎ 高耐磨性
High wearability
全新升级的含Si的AlCr系涂层
New upgrade AlCr coating with Si





◎ U型槽设计
U-shape groove design
优异排屑性能，同时保证刚性
Excellent chip removal performance, ensure rigidity

◎ 不等螺旋、不等分度，β1≠β2，θ1≠θ2
Unequal helix angle, unequal space pitch
优异的抗振性能，实现高效加工
Excellent vibration resistance, realize high performance processing



◎ 应用特点 Application Feature

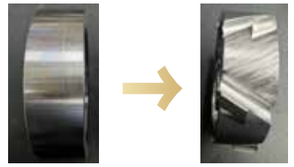
被加工材料——硬度≤HRC48的普通钢、铸铁、不锈钢、钛合金等多种材料的高效加工
Processed material——Suitable for high performance processing of normal steel（≤HRC48）, cast iron , stainless steel, titanium alloy and other materials

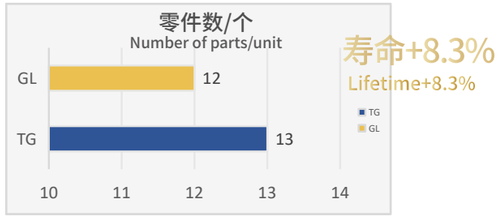
应用行业——适合用于模具、汽车、3C、航空、通用机械等各个行业
Application industry——Suitable for various industries of die and mold,3C,automobile,aerospace, general machinery and so on

推荐加工参数——线速度：侧铣100～250m/min;槽铣40-100m/min
加工方式：1.5D~2D大切深侧铣加工；1D槽铣等高效率加工
Recommended machining parameter——side milling 100~250m/min; slot milling 40~100 m/min;
Processing method：1.5D~2D large cutting depth side milling;1D efficient slot milling

◎ 应用案例 Application Feature

刀具型号 Tool Model	P40-S4-12-30-12-75
刀具规格 Tool Specification	D12*30*d12*75*4F
加工材料 Processing Material	45钢(HB255)
切削速度 Cutting Speed	2600 rpm (98m/min)
进给速度 Feed Speed	500mm/min(0.048mm/z)
切削方式 Cutting Mode	方肩铣 Shoulder milling
切深量 Depth of Cutting	ap=5mm，ae=4mm
冷却方式 Type of Cooling	水基乳化液 water-based emulsion
切削效果 Cutting Result	我司刀具可加工13个工件，对手加工12个零件 TG can process 13 workpieces, but the competitor can just process 12 workpieces.





A10铝合金经济型立铣刀
A10 Economical Endmill for Aluminium Alloy

◎ 产品特点 Product Feature

◎ 经过抛光处理的周刃清边留量设计，确保良好的工件表面光洁度
Polished margin design，ensure workpiece surface quality

◎ 大前角及大螺旋角设计确保刀具锋利性
Large rake angle and large helix angle design, ensure the tool sharpness

◎ 采用整槽抛光处理工艺确保良好的排屑性能及刃口质量
Adopt the whole groove polishing process, ensure great chip removal performance and cutting edge quality

◎ One pass槽型设计
One pass groove design

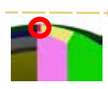
保证了良好的排屑性能及整体钢性
Ensure great chip removal performance and integral rigidity

A40铝合金高效加工立铣刀
A40 High Performance Endmill for Aluminium Alloy

◎ 产品特点 Product Feature

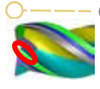
◎ “U”型槽及大槽深设计，前刀面抛光处理，排屑性能优异
U-shape groove and small core diameter design, polished rake face, excellent chip removal performance

◎ 底刃修光刃设计，保证良好的工件底面光洁度
Wiper design，ensure great bottom roughness of workpiece



◎ 不等螺旋不等分度设计（β1≠β2≠β3，θ1≠θ2≠θ3），优异的抗振性能
Unequal helix angle, unequal space pitch angle, excellent vibration resistance

◎ 经过抛光的周刃清边留量，确保良好的工件侧壁光洁度
The polished margin design ensure great sidewall roughness of workpiece



◎ 应用特点 Application Feature

被加工材料——适用于铝合金（Si≤12%）及铜合金（<200HB）的高效加工
Processed material——Suitable for high performance processing of aluminium alloy（Si≤12%）and copper alloy（<200HB）

应用行业——适合用于3C、航空等行业
Application industry——Suitable for 3C,aerospace, and so on

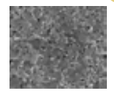
推荐加工参数——转速：5000~20000rpm；　加工方式：侧铣、槽铣等多种方式；　冷却方式：水冷为最佳冷却方式
Recommended machining parameter——Rotational speed: 5000~20000rpm;Processing method：side milling, slot milling and so on
Type of cooling: water cooling is the best cooling method

M30不锈钢高速加工立铣刀
M30 High Speed Processing Endmill for Stainless Steel

◎ 产品特点 Product Feature

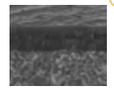
◎ **高耐磨性**
High wearability

超细颗粒硬质合金基体
Utra-fine grain cemented carbide substrate



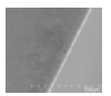
◎ **高温抗氧化性好**
High oxidation resistance

采用高铝的涂层
High aluminum element coating

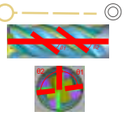


◎ **特殊刃口前后处理**
Special cutting edge pre-treatment and post-treatment

优化刃口质量以及刃口强度
Optimize cutting edge quality and strength



◎ **不等螺旋、不等分度，β1≠β2，θ1≠θ2**
Unequal helix angle,unequal space pitch angle β1≠β2，θ1≠θ2



优异的抗振性能
Excellent vibration resistance

◎ 应用特点 Application Feature

被加工材料——硬度≤HRC48的钢件、不锈钢材料的高速加工
Processed material——Suitable for high speed processing of steel（≤HRC48）, stainless steel materials

应用行业——适合用于模具、汽车、3C、航空、通用机械等各个行业
Application industry——Suitable for various industries of die and mold,3C,automobile,aerospace, general machinery and so on

推荐加工参数——线速度：侧铣80～200m/min;加工方式：2D大切深侧铣高速加工
Recommended machining parameter——Cutting speed : side milling 80~200m/min;Processing method：2D large cutting depth side milling high speed processing

H20高硬钢通用加工立铣刀
H20 General Processing Endmill for Hardened Steel

◎ 产品特点 Product Feature

◎ **高耐磨性**
High wearability

超细晶硬质合金基体
Ultra-fine grain cemented carbide substrate

◎ **良好耐磨性及高温抗氧化性**
High wearability and oxidation resistance

含Si的AlCr系涂层
AlCr coating with Si

◎ **兼具锋利性及刃口强度**
Both sharpness and edge strength

大螺旋角设计，保证锋利性
特殊前后角设计，保证刃口强度及耐磨性
Large helix Angle design, ensure the sharpness
Special rake and clearance angle design, ensure edge strength and wearability

◎ 应用特点 Application Feature

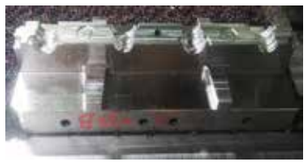
被加工材料——适用于高硬钢（≤HRC55）等材料的通用加工
Processed material——Suitable for general processing of hardened steel（≤HRC55）and so on

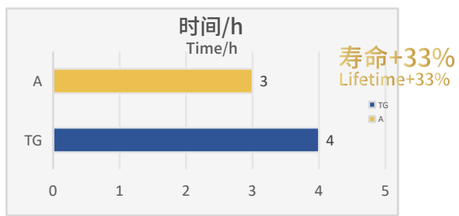
应用行业——适合用于模具、汽车、通用机械等各个行业
Application industry——Suitable for various industries of die and mold,automobile, general machinery and so on

推荐加工参数——线速度：50～250m/min;加工方式：面铣、侧铣等多种方式
Recommended machining parameter——Cutting speed : 50~250m/min;Processing method：face milling, side milling and so on

◎ 应用案例 Application Feature

刀具型号 Tool Model	H20-R4-6-15-6-50-0.5
刀具规格 Tool Specification	D6*R0.5*15*50*d6
加工材料 Processing Material	718（HRC33）
切削速度 Cutting Speed	3000rpm (56.5m/min)
进给速度 Feed Speed	2000mm/min(0.167mm/z)
切削方式 Cutting Mode	面铣 face milling
切深量 Depth of Cutting	ap=0.15 mm，ae=0.4mm
冷却方式 Type of Cooling	气冷 air cooling
切削效果 Cutting Result	我司加工4h，对手刀具加工3h TG can process 4h, but the competitor can just process 3h.





H30高硬钢高速加工立铣刀
H30 High Speed Processing Endmill for Hardened Steel

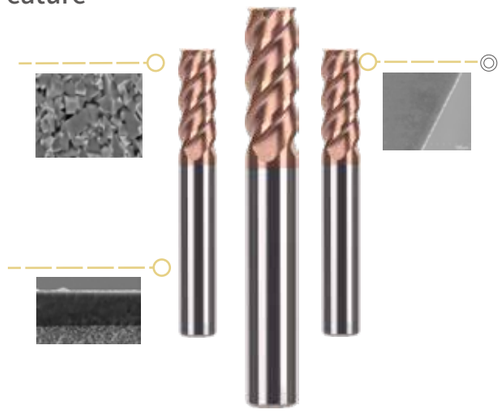
◎ 产品特点 Product Feature

◎ **高耐磨性**
High wearability

超高耐磨性的硬质合金基体
Ultrahigh wearability cemented carbide substrate

◎ **高耐磨性及抗氧化性**
High wearability and oxidation resistance

含Si高硬涂层
High hard coating with Si



◎ **高刃口质量**
High cutting edge quality

精细的刃口磨削技术,特殊的刃口处理工艺
Fine cutting edge grinding technology
Special edge preparation technology

◎ 应用特点 Application Feature

被加工材料——硬度HRC48~65的高硬钢材料的高速加工
Processed material——Suitable for high speed processing of hardened steel material（HRC48~65）

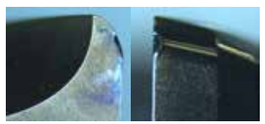
应用行业——适合用于模具、汽车、航空、通用机械等各个行业
Application industry——Suitable for various industries of die and mold,automobile, general machinery and so on

推荐加工参数——线速度：侧铣80～150m/min；　加工方式：大切深小切宽的侧铣高速加工以及小切深面铣加工
Recommended machining parameter——Cutting speed : side milling 80~150m/min;　Processing method：High speed side milling machining with large cutting depth and small cutting width, small cutting depth face milling

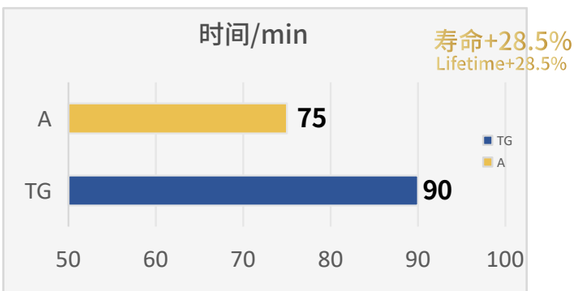
◎ 应用案例

刀具型号 Tool Model	H30-R4-8-16-8-60-0.5
刀具规格 Tool Specification	D8*R0.5*16*60*d8*4F
加工材料 Processing Material	SKD61(HRC60)
切削速度 Cutting Speed	4000 rpm (100.5m/min)
进给速度 Feed Speed	1600mm/min(0.1mm/z)
切削方式 Cutting Mode	面铣 face milling
切深量 Depth of Cutting	ap=0.08mm，ae=0.5mm
冷却方式 Type of Cooling	气冷 air cooling
切削效果 Cutting Result	以后刀面磨损0.1mm的寿命测试标准，我司刀具可加工90min，而对手仅加工75min In case of the back tool face wear 0.1mm, TG can process 90 min, but the opponent can just process 75 min

TG



A公司



TC通用加工螺纹铣刀
TC General Processing Thread milling cutter

◎产品及应用特点 Product and Application Feature

◎适用范围广
Use widely

适合用于钢材、铝合金、铸铁、不锈钢、高硬钢、钛合金、高温合金等各种材料的加工
Suitable for steel, aluminium alloy, cast iron, stainless steel, hardened steel, titanium alloy and so on

◎加工效率高
High processing efficiency

由于丝锥比较低的切削速度限制，加工效率低；而使用硬质合金螺纹铣刀可轻松提高线速度和进给速度
The cutting speed limit of the tap is low, and the processing efficiency is low; The carbide thread milling cutter can increase the cutting speed and feed speed easily

◎加工成本低
Low processing cost

螺纹铣刀使用灵活，可以适用多种工况；同一把螺纹铣刀可加工左旋螺纹、右旋螺纹、外螺纹、内螺纹
Thread endmill is flexible, can suitable for multiple work situations; The same thread milling cutter can process the left-hand thread and right-hand thread; It can process internal thread and external thread;

◎安全系数高
High safety coefficient

丝攻折断后很难取出，容易造成工件报废；而螺纹铣刀即使发生折断也可轻松取出，不会造成工件报废
If the tap is broken, It will be difficult to take out. But the thread milling cutter can be taken out easily, it won't cause the workpiece scrapped

DR通用加工钻头
DR General Processing Drill

◎产品特点 Product Feature

◎优异红硬性和抗氧化性
Excellent red hardness and oxidation resistance

CrAlN基纳米涂层，拥有良好的高温抗氧化性能
CrAlNnano-coating, has good high-temperature oxidation resistance

◎特殊刃口处理
Special cutting edge treatment

涂层前处理：强化刃口强度稳定性
涂层后处理：去除液滴，表面光滑
Pre-coating treatment: improve the quality of cutting edge strength
Post-coating treatment: remove drops, smooth surface

◎优异断屑性能
Excellent chip-breaking performance

全新槽型设计：增强断屑性能，同时提升刀具刚性：波形刃设计，兼顾刀尖强度及切削锋利性
New groove design: improve chip-breaking performance and rigidity.Corrugated edge design: Both tip strength and cutting sharpness

◎应用特点 Application Feature

被加工材料——适用于钢、铸铁、软钢、合金钢的钻削加工
Processed material——Suitable for hole processing of steel, cast iron, alloy steel

应用行业——适合用于汽车、模具、通用、能源重工等行业
Application industry——Suitable for industries of die and mold,automobile, general machinery,heavy energy and so on

推荐加工参数——线速度：30m/min~120m/min
Recommended machining parameter——Cutting speed : 30m/min~120m/min

可转位切削刀具
Indexable Cutting Tools

SEKT面铣刀片 SEKT Face Milling

刀片特点 Insert Feature

1.单面槽型设计，4个切削刃口，更经济。
2.适中刃宽及减磨槽设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁平面铣削加工。

1.Single-sided groove design，4 cutting edges，more economical.
2.Moderate insert width and anti-wear groove design，both edge belt strength and sharpness and chip removal is better.
3.Match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。

1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。

1.TiAlSiN laminated coating，match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	SEKT1204AFTN-M33-TM5250
刀杆型号 Cutter Bar Model	直径63铣刀盘 Diameter 63 milling cutter head
加工材料 Processing Material	Cr12MoV 硬度HRC22 Cr12MoV hardness HRC28-32
转速 Rotate Speed	S1620
进给 Feed	F450
下刀量 Cutting-in	0.5mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	5组工件 5 groups workpieces

总结：我司一个刀片位不转位，可连续加工5组工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间3组工件。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 5 groups workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 3 groups workpieces. Compare processing time and price, TG inserts are more cost-effective.

SNMU面铣刀片 SNMU Face Milling

刀片特点 Insert Feature

1.双面槽型设计，8个切削刃口，更经济。
2.适中刃宽及刃倾角设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁平面铣削加工。

1.Double-sided groove design，8 cutting edges，more economical.
2.Moderate insert width and anti-wear groove design，both edge belt strength and sharpness and chip removal is better.
3.Match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。

1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TK6150:
1.采用高强度细颗粒合金基体与TiCN、超细Al2O3的纳米涂层组合，具有更好抗变形能力及热稳定性。
2.适用于中低速度下各类铸铁的半精到粗加工铣削，干湿工况均可。

1.The combination of high-strength fine-grained alloy matrix and TiCN, ultrafine Al2O3 nanocoating has better deformation resistance and thermal stability.
2.Suitable for semi-precision to rough milling of medium-low speed, both wet and dry conditions are acceptable.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	SNMU1206ZNEN-M33-TK6150
刀杆型号 Cutter Bar Model	直径100铣刀盘 Diameter 100 milling cutter head
加工材料 Processing Material	QT450 硬度HRC26 QT450 hardness HRC26
转速 Rotate Speed	S500
进给 Feed	F720
下刀量 Cutting-in	3.5mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	35个工件 35 workpieces

总结：我司一个刀片位不转位，可连续加工35工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间35工件。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 35 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 35 workpieces. Compare processing time and price, TG inserts are more cost-effective.

PNMU面铣刀片 PNMU Face Milling

刀片特点 Insert Feature

1.双面槽型设计，10个切削刃口，更经济。
2.适中刃宽及刃倾角设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于模具钢、普通钢、淬火钢及铸铁平面铣削加工。

1.Double-sided groove design，10 cutting edges，more economical
2.Moderate insert width and anti-wear groove design，both edge belt strength and sharpness and chip removal is better
3.Match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Fead,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。

1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TH5150:
1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于 45-55HRC的高硬钢精到半精加工铣削。

1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix，have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

实际加工案例 Actual Processing Case

刀片型号 Insert Model	PNMU0905GNER-M33-TU5250
刀杆型号 Cutter Bar Model	直径63铣刀盘 Diameter 63 milling cutter head
加工材料 Processing Material	40Cr 硬度HRC25 40Cr hardness HRC26
转速 Rotate Speed	S1620
进给 Feed	F450
下刀量 Cutting-in	0.5mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	8组工件 8 groups workpieces

总结：我司一个刀片位不转位，可连续加工8组工件，未崩，正常磨损，每个刀片位，加工时间稳定，日本某品牌，连续加工时间7组工件。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 8 groups workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known Japan brand, their products continuous processing time are 7 groups workpieces. Compare processing time and price, TG inserts are more cost-effective.

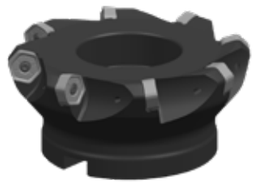
HNGX面铣刀片 HNGX Face Milling

刀片特点 Insert Feature

1.双面槽型设计，12个切削刃口，更经济。
2.适中刃宽设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于模具钢、普通钢、淬火钢及铸铁平面铣削加工。

1.Double-sided groove design，12 cutting edges，more economical
2.Moderate insert width and anti-wear groove design，both edge belt strength and sharpness and chip removal is better
3.Match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature



1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVDAlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。

1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	HNGX0907ANSN-M43-TU5250
刀杆型号 Cutter Bar Model	直径80铣刀盘 Diameter 80 milling cutter head
加工材料 Processing Material	Q235
转速 Rotate Speed	S800
进给 Feed	F1300
下刀量 Cutting-in	2mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	38个工件 38 workpieces

总结：我司一个刀片位不转位，可连续加工38个工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间35个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 38 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 35 workpieces. Compare processing time and price, TG inserts are more cost-effective.

ONGU、ONMX面铣刀片 ONGU/ONMX Face Milling

刀片特点 Insert Feature

1.双面槽型设计，16个切削刃口，更经济。
2.适中刃宽设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于模具钢、普通钢、淬火钢及铸铁平面铣削加工。

1.Double-sided groove design，16 cutting edges，more economical
2.Moderate insert width and anti-wear groove design，both edge belt strength and sharpness and chip removal is better
3.Match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating，match high strength fine grained carbide matrix，It has good wear resistance，toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

TK6150:
1.采用高强度细颗粒合金基体与TiCN、超细Al2O3的纳米涂层组合，具有更好抗变形能力及热稳定性。
2.适用于中低速度下各类铸铁的半精到粗加工铣削，干湿工况均可。
1.The combination of high-strength fine-grained alloy matrix and TiCN, ultrafine Al2O3 nanocoating has better deformation resistance and thermal stability.
2.Suitable for semi-precision to rough milling of medium-low speed, both wet and dry conditions are acceptable.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	ONMX060408-M42-TM5250
刀杆型号 Cutter Bar Model	直径160铣刀盘 Diameter 160 milling cutter head
加工材料 Processing Material	15-5PH不锈钢 硬度HB220 15-5PH stainless steel,hardness HB220
转速 Rotate Speed	S200
进给 Feed	F1200
下刀量 Cutting-in	1.0mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	6个工件 6 workpieces

总结: 我司一个刀片位不转位，可连续加工6个工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间4个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can ontinuous processing for 6 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 4 workpieces. Compare processing time and price, TG inserts are more cost-effective.

SOMT快进给铣刀片 SOMT High Feed Milling

刀片特点 Insert Feature

1.4角可用，经济高效---单面槽型设计，4个切削刃口，更经济，更高效。
2.刃部强度高，抗崩性好，下刀量大，耐冲击，抗磨损。
3.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---适合平面铣削、槽铣及型腔高效铣削。
4.应用范围广泛，搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁加工。

1.4 corners available，economical and efficient---single-sided groove design，4 cutting edges，more economical, more efficient.
2.High edge strength，good collapse resistance，the cut is large，impact resistance，resistance to wear.
3.Use all kinds of different working conditions to make processing easier,our products can better meet the production needs.---Suitable for surface milling、slot milling and efficient cavity milling
4.Wide range of applications，sharp edge and edge Angle design effectively reduces cutting resistance, match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating，match high strength fine grained carbide matrix，It has good wear resistance，toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	SOMT140520ER-M30-TU5250
刀杆型号 Cutter Bar Model	直径80铣刀盘 Diameter 80 milling cutter head
加工材料 Processing Material	P20 硬度HRC28-32 P20 hardnessHRC28-32
转速 Rotate Speed	S450
进给 Feed	F4000
下刀量 Cutting-in	0.8mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	3.5小时 3.5 H

总结: 我司一个刀片位不转位，可连续加工3.5小时，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间2.5小时。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 3.5 hours,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 2.5 hours. Compare processing time and price, TG inserts are more cost-effective.

SDMT快进给铣刀片 SDMT High Feed Milling

刀片特点 Insert Feature

1.4角可用，经济高效---单面槽型设计，4个切削刃口，更经济，更高效。
2.刃部强度高，抗崩性好，下刀量大，耐冲击，抗磨损。
3.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---适合平面铣削、槽铣及型腔高效铣削。
4.应用范围广泛，搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁加工。

1.4 corners available, economical and efficient---single-sided groove design, 4 cutting edges, more economical, more efficient.
2.High edge strength, good collapse resistance, the cut is large, impact resistance, resistance to wear.
3.Use all kinds of different working conditions to make processing easier,our products can better meet the production needs.---Suitable for surface milling, slot milling and efficient cavity milling
4.Wide range of applications, sharp edge and edge Angle design effectively reduces cutting resistance, match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TH5150:
1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于 45-55HRC的高硬钢精到半精加工铣削。
1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix, have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

实际加工案例 Actual Processing Case

刀片型号 Insert Model	SDMT150512-M32-TH5150
刀杆型号 Cutter Bar Model	直径63铣刀盘 Diameter 63 milling cutter head
加工材料 Processing Material	M具钢硬度HRC48-52 Mold steel hardness HRC28-32
转速 Rotate Speed	S600
进给 Feed	F2400
下刀量 Cutting-in	0.8mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	1.5小时 1.5 h

总结: 我司一个刀片位不转位，可连续加工1.5小时，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间1小时。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company,it can continuous processing for 1.5 hours,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 1 hours. Compare processing time and price, TG inserts are more cost-effective.

BLMP快进给铣刀片 BLMP High Feed Milling

刀片特点 Insert Feature

1.双面可用，经济高效---双面槽型设计，4个切削刃口，更经济，更高效。
2.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---台阶面加工，模具仿形加工，开槽切入加工，斜坡加工。
3.应用范围广泛，锋利的刃口设计有效降低切削阻力，搭配不同的专用牌号用于钛合金、不锈钢、模具钢、普通钢及铸铁加工。

1.Both sides available, cost-effective---double-sided groove design, 4 cutting edges, more economical, more efficient.
2.Use all kinds of different working conditions to make processing easier,our products can better meet the production needs.--- step surface processing, slot cutting processing, slope processing.
3.Wide range of applications, sharp edge and edge Angle design effectively reduces cutting resistance, match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TH5150:
1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于45-55HRC的高硬钢精到半精加工铣削。
1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix, have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

TS5150:
1.甄选优质进口母材，搭配巴尔查斯钛合金专用纳米涂层。
2.适合加工：钛合金TC4TC18、双相不锈钢2205、镍基合金718、高温合金等
3.推荐参数：VC :40~80 m / min ； fz :0.3-0.5mm/z； ap :0.5-0.8mm
1.High-quality imported materials, match special nano coating for Balzers titanium alloy.
2.Suitable for processing：Titanium alloy TC4TC18/duplex stainless steel 2205/nickel-based alloy 718/high temperature alloy and so on
3.Recommended parameter：VC :40~80 m / min ； fz :0.3-0.5mm ； ap :0.5-0.8mm

实际加工案例 Actual Processing Case

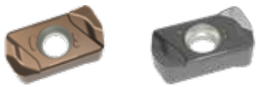
刀片型号 Insert Model	BLMPO603R-M42-TS5150
刀杆型号 Cutter Bar Model	TEBL06-2050-C20-3T
加工材料 Processing Material	高温合金镍718 Superalloy nickel718
转速 Rotate Speed	S800
进给 Feed	F900
下刀量 Cutting-in	0.6mm
加工机床 Processing Engine Bed	五轴加工中心 Five-axis machining center
连续加工时间 Continuous Processing Time	60分钟 60 min

总结: 我司一个刀片位不转位，可连续加工60分钟，未崩，正常磨损，每个刀片位，加工时间稳定，韩国某知名品牌，连续加工时间65分钟。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 60 minutes,No burst,normal wear.The processing time is stable for each insert position.A well-known Korean brand, their products continuous processing time are 65 minutes. Compare processing time and price,TG inserts are more cost-effective.

LNMU快进给铣刀片 LNMU High Feed Milling

刀片特点 Insert Feature



1.双面可用，经济高效---双面槽型设计，4个切削刃口，更经济，更高效。
2.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---台阶面加工，模具仿形加工，开槽切入加工，斜坡加工。
3.应用范围广泛，锋利的刃口设计有效降低切削阻力，搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁加工。

1.Both sides available, cost-effective---double-sided groove design, 4 cutting edges, more economical, more efficient.
2.Use all kinds of different working conditions to make processing easier,our products can better meet the production needs.--- step surface processing, slot cutting processing, slope processing.
3.Wide range of applications, sharp edge and edge Angle design effectively reduces cutting resistance, match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating, match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	LNMU0303ZER-M42-TU5250
刀杆型号 Cutter Bar Model	直径32铣刀杆 Diameter 32 cutter bar
加工材料 Processing Material	42CrMo 硬度HB300 42CrMo hardness HB300
转速 Rotate Speed	S1650
进给 Feed	F5000
下刀量 Cutting-in	0.35mm
加工机床 Processing Engine Bed	五轴加工中心 Five-axis machining center
连续加工时间 Continuous Processing Time	1.5小时 1.5H

总结：我司一个刀片位不转位，可连续加工1.5小时，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间1小时。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 1.5 hours,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 1 hours. Compare processing time and price, TG inserts are more cost-effective.

APMT方肩铣刀片 APMT Shoulder Milling

刀片特点 Insert Heature

1.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---台阶面加工，开槽切入加工，斜坡加工。
2.应用范围广泛，锋利的刃口及刃倾角设计有效降低切削阻力，搭配不同的槽型及专用牌号用于不锈钢、模具钢、普通钢及铸铁加工。

1.Can be used in different working conditions, so that the processing is simple and meet production demand ---step surface processing, slot cutting processing, slope processing
2.Wide range of applications, sharp cutting edge and edge Angle design can reduce cutting resistance effectively.Match different groove types and special grades for stainless steel, die steel, ordinary steel and cast iron processing.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TP5250:
1.采用抗变形能力极好的基体材料和纳米涂层，具有良好的耐磨性、韧性及热稳定性，可以实现不同工况的稳定加工，应用范围广。
2.适用于钢件材料的通用加工。
1.Adopt the matrix material and nano-coating with excellent deformation resistance.It has good wear resistance, toughness and thermal stability. It can realize stable processing under different working conditions and has a wide range of applications
2.Suitable for the general processing of steel materials

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating, match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

TH5150:
1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于45-55HRC的高硬钢精到半精加工铣削。
1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix, have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

实际加工案例 Actual Processing Case

刀片型号 Insert Model	APMT1135PDER-M32-TU5250
刀杆型号 Cutter Bar Model	直径D21 Diameter 21
加工材料 Processing Material	HT250
转速 Rotate Speed	S2200
进给 Feed	F2500
切深 Cutting-in	0.2mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	5小时 5H

总结：我司一个刀片位不转位，可连续加工5小时，未崩，正常磨损，每个刀片位，加工时间稳定，日本某知名品牌，连续加工时间4小时。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 5 hours,No burst,normal wear.The processing time is stable for each insert position.A well-known Japanese brand, their products continuous processing time are 4 hours. Compare processing time and price, TG inserts are more cost-effective.

4NKT方肩铣刀片 4NKT Shoulder Milling

刀片特点 APMT Shoulder Milling

1.双面可用，经济高效——双面槽型设计，4个切削刃口，更经济，更高效。
2.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---台阶面加工，开槽切入加工，斜坡加工。
3.应用范围广泛，锋利的刃口及刃倾角设计有效降低切削阻力，搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁加工。

1.Both sides available, cost-effective---double-sided groove design，4 cutting edges，more economical, more efficient.
2.Use all kinds of different working conditions to make processing easier,our products can better meet the production needs.--- step surface processing, slot cutting processing, slope processing.
3.Wide range of applications，sharp edge and edge Angle design effectively reduces cutting resistance, match different special brand process f or stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating, match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

TK6150:
1.采用高强度细颗粒合金基体与TiCN、超细Al2O3的纳米涂层组合，具有更好抗变形能力及热稳定性。
2.适用于中低速度下各类铸铁的半精到粗加工铣削，干湿工况均可。
1.TiAlN nano-coating match fine grain carbide matrix, It has excellent wearability and collapse resistance.
2.Suitable for semi-precision to rough milling of medium-low speed, both wet and dry conditions are acceptable.

实际加工案例 Actual Processing Case

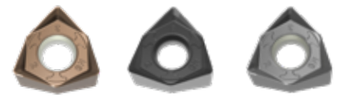
刀片型号 Insert Model	4NKT060308R-M42-TM5250
刀杆型号 Cutter Bar Model	直径D16 Diameter 16
加工材料 Processing Material	A3钢 A3 steel
转速 Rotate Speed	S2000
进给 Feed	F2500
切深 Cutting-in	0.2mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	90分钟 90 min

总结：我司一个刀片位不转位，可连续加工90分钟，未崩，正常磨损，每个刀片位，加工时间稳定，韩国某知名品牌，连续加工时间80分钟。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 90 minutes,No burst,normal wear.The processing time is stable for each insert position.A well-known Korean brand, their products continuous processing time are 80 minutes. Compare processing time and price, TG inserts are more cost-effective.

WNMU方肩铣刀片 WNMU Shoulder Milling

刀片特点 Insert Feature



1.双面槽型设计，6个切削刃口，更经济。
2.适中刃宽及刃倾角设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁平面铣削加工。

1.Double-sided groove design，8 cutting edges，more economical.
2.Moderate edge width and edge Angle design，it is better to take into account the strength and sharpness of the insert belt.
3、.Match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TK6150:
1.采用高强度细颗粒合金基体与TiCN、超细Al203的纳米涂层组合,具有更好抗变形能力及热稳定性。
2.适用于中低速度下各类铸铁的半精到粗加工铣削，干湿工况均可。
1.The combination of high-strength fine-grained alloy matrix and TiCN, ultrafine Al2O3 nanocoating has better deformation resistance and thermal stability.
2.Suitable for semi-precision to rough milling of medium-low speed, both wet and dry conditions are acceptable.

TM5250:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating, match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

TH5150:
1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于45-55HRC的高硬钢精到半精加工铣削。
1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix，have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

实际加工案例 Actual Processing Case

刀片型号 Insert Model	WNMU080608EN-M43-TK6150
刀杆型号 Cutter Bar Model	直径D63刀盘Diameter 63 cutter bar
加工材料 Processing Material	HT450
转速 Rotate Speed	S800
进给 Feed	F250
切深 Cutting-in	2.5mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	100个工件 100 workpieces

总结：我司一个刀片位不转位，可连续加工100个工件，正常磨损，每个刀片位，加工时间稳定，国产某知名品牌，连续加工时间70个工件。综合加工时间跟价格，我司刀片性价比较高。

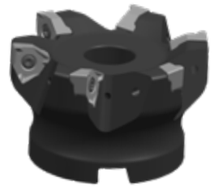
Conclusion: A insert bit is not transposed in our company,it can continuous processing for 100 workpieces,normal wear.The processing time is stable for each insert position.A well-known Chinese brand, their products continuous processing time are 70 workpieces. Compare processing time and price, TG inserts are more cost-effective.

XNEX方肩铣刀片 XNEX Shoulder Milling

刀片特点 Insert Feature

1.双面槽型设计，6个切削刃口，更经济。周边及修光刃精磨，转位精度更高。
2.适中刃宽及刃倾角设计，兼顾刃带强度及锋利性排屑更优越。
3.搭配不同的专用牌号用于模具钢、普通钢及铸铁平面铣削加工。

1.Double-sided groove design, 6 cutting edges, more economical. Periphery and finishing edge fine grinding, higher transposition accuracy
2.Moderate edge width and edge Angle design, it is better to take into account the strength and sharpness of the insert belt.
3. Match different special brand process for stainless steel, mold steel, normal steel and cast iron.



刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:

1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。

1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TH5150:

1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于45-55HRC的高硬钢精到半精加工铣削。

1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix, have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

实际加工案例 Actual Processing Case

刀片型号 Insert Model	XNEX080608R-M53-TU5250
刀杆型号 Cutter Bar Model	直径D200刀盘 Diameter D200
加工材料 Processing Material	45#钢
转速 Rotate Speed	S380
进给 Feed	F500
切深 Cutting-in	1mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	20个工件 20 workpieces

总结：我司一个刀片位不转位，可连续加工20个工件，正常磨损，每个刀片位，加工时间稳定，国产某知名品牌，连续加工时间17个工件。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 20 workpieces,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 17 workpieces. Compare processing time and price, TG inserts are more cost-effective.

仿形铣圆刀片 Profile Milling

刀片特点 Insert Feature

1.R11槽型：小前角，平板设计，切削刃强度高，通用材料重切削。M32槽型：小前角带排屑槽设计，利于排屑，适用于通用材料中等切削。
2.应用各种不同工况，让加工变得更简单，能更好的满足生产需求。---台阶面加工，模具仿形加工，开槽切入加工，斜坡加工。
3.应用范围广泛，锋利的刃口设计有效降低切削阻力，搭配不同的专用牌号用于不锈钢、模具钢、普通钢及铸铁加工。

1.R11 groove profile:small front angle, slab design, high cutting edge strength, general material heavy cutting M32 groove profile:
2.Use all kinds of different working conditions to make processing easier,our products can better meet the production needs.--- step surface processing, slot cutting processing, slope processing.
3.Wide range of applications, sharp edge and edge Angle design effectively reduces cutting resistance, match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:

1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。

1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TP5250:

1.纳米结构的 TiAlN 涂层与微细晶粒硬质合金基体相结合，耐磨性优异。
2.适合钢材的半精到轻微粗加工。

1.Adopt the matrix material and nano-coating with excellent deformation resistance.It has good wear resistance, toughness and thermal stability. It can realize stable processing under different working conditions and has a wide range of applications
2.Suitable for the general processing of steel materials

TM5250:

1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。

1.TiAlSiN laminated coating, match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

TH5150:

1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于45-55HRC的高硬钢精到半精加工铣削。

1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix, have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

实际加工案例 Actual Processing Case

刀片型号 Insert Model	RPMW1003M0-R11-TU5250
刀杆型号 Cutter Bar Model	直径21铣刀杆 Diameter 21 cutter bar
加工材料 Processing Material	45#钢 45#steel
转速 Rotate Speed	S1700
进给 Feed	F3300
下刀量 Cutting-in	0.4mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	5小时 5h

总结：我司一个刀片位不转位，可连续加工5小时，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间4.5小时。综合加工时间跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 5 hours,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 4.5 hours. Compare processing time and price, TG inserts are more cost-effective.

SPMG、WCMT U钻刀片 SPMG WCMT U drilling

刀片特点 Insert Feature

1.适中刃宽设计，兼顾刃带强度及锋利性排屑更优越。
2.搭配不同的专用牌号用于模具钢、普通钢、淬火钢及铸铁平面铣削加工。
1.Moderate insert width and anti-wear groove design, both edge belt strength and sharpness and chip removal is better
2.match different special brand process for stainless steel, mold steel, normal steel and cast iron.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。
1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TU5250:
1.PVD AlTiN 涂层与微细晶粒硬质合金基体相结合。
2.适合中等到低速工况下，钢材、铸铁等材料的一般加工。
1.PVD AlTiN coating is combined with a micro-grained cemented carbide matrix.
2.Suitable for medium to low speed operating conditions,general processing of steel, cast iron and other materials.

TU5170:
1.TiAlSiN 多层涂层，搭配高强度细晶硬质合金基体，具有良好的耐磨性、韧性及热稳定性。
2.适用于不锈钢、合金等难加工材料的粗加工与不稳定工况加工。
1.TiAlSiN laminated coating, match high strength fine grained carbide matrix, It has good wear resistance, toughness and thermal stability.
2.Suitable for rough and unstable processing for stainless steel, alloy and other difficult materials.

TH5170:
1.纳米复合硬质涂层与超细晶粒硬质合金基体结合，兼备高抗氧化性与红硬性。
2.适用于 40-45HRC的预硬钢钻削加工。
1.The nano composite hard coating is combined with the ultrafine grain hard alloy matrix, have both high oxidation resistance and red hardness.
2.Suitable for 45-55HRC high hardness steel finishing to semi-finishing milling

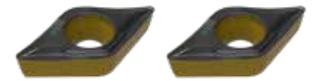
实际加工案例 Actual Processing Case

刀片型号 Insert Model	SPMG07T308-M43-TU5270
刀杆型号 Cutter Bar Model	直径23U钻刀杆4倍径 23U drill tool 4 times diameter
加工材料 Processing Material	45#钢 HRC25 45#steel HRC25
转速 Rotate Speed	S2000
进给 Feed	F240
孔深 Cutting-in	20mm
加工机床 Processing Engine Bed	加工中心 Machining center
连续加工时间 Continuous Processing Time	60个工件 60 workpieces

总结：我司一个刀片位不转位，可连续加工60个工件，未崩，正常磨损，每个刀片位，加工时间稳定，韩国某品牌，连续加工时间60个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 60 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 60 workpieces. Compare processing time and price. TG inserts are more cost-effective.

PM2车刀片 PM2 Steel Turning



刀片特点 Insert Feature

1.钢件半精加工断屑槽型；
2.近刀尖处槽型窄，向后逐渐变宽，断屑范围宽；
3.双前角设计，切削较轻快，刀尖增强设计；
4.大前角设计，抗月牙洼磨损效果好。
1.Steel semi-finishing chip breaking groove type.
2.The groove is narrow near the tip, it widens backwards, wide chip breaking range.
3.Double rake angle design, lighter cutting, tip enhancement design.
4.Large rake angle design, good anti-crescent wear effect.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。
1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TP6110:
1.采用超细晶粒基体配合优异耐磨性涂层，具有优异的耐磨性；
2.适用于碳钢、合金钢、结构钢等材料的连续加工。
1.Use ultrafine grain matrix with excellent wear resistance coating, has excellent wearability;
2.Suitable for continuous processing of carbon steel, alloy steel, structural steel and other materials.

TP6210:
1.采用韧性好的富钴基体，配合强韧涂层，兼顾良好的耐磨性和抗崩性；
2.适用于碳钢、合金钢等材料的连续至一般断续工况的半精加工。
1.Use cobalt rich matrix with good toughness,match strong coating, has both wearablilty and collapse resistance.
2.Suitable for semi-finishing from continuous to general intermittent conditions of carbon steel, alloy steel, structural steel and other materials.

TP6310:
1.采用高强度与抗塑性变形基体，配合高韧涂层，韧性及抗崩性能大大提高；
2.适用于碳钢、合金钢等材料断续工况的轻型粗加工与粗加工。
1.Use high strength and resistance to plastic deformation matrix, match high toughness coating, toughness and collapse resistance are greatly improved.
2.Suitable for light roughing and roughing of carbon steel, alloy steel and other materials in intermittent working conditions.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	CCMT09T304-PM2-TP6110
刀杆型号 Cutter Bar Model	S20R-SCLCR09
加工材料 Processing Material	45#钢 硬度HRC23 45#steel hardness HRC23
线速度 Rotate Speed	V180m/min
每转进给 Feed	0.15mm/r
切深 Cutting-in	0.5mm
连续加工时间 Continuous Processing Time	980个工件 980 workpieces

总结：我司一个刀片位不转位，可连续加工980个工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间900个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 980 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 900 workpieces. Compare processing time and price, TG inserts are more cost-effective.

PM3车刀片 PM3 Steel Turning

刀片特点 Insert Feature

1.钢件半精加工断屑槽型；
2.近刀尖处槽型窄，向后逐渐变宽，断屑范围宽；
3.双前角设计，切削较轻快，刀尖增强设计；
4.大前角设计，抗月牙洼磨损效果好。
1.Semi-finishing chip-breaking groove for steel parts.
2.The groove is narrow near the tip，gradually widen towards back,chip breaking has wide range.
3.Double rake angle design，lighter cutting，tip enhancement design.
4.Large front corner design，great anti-crescent wear effect.

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。
1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TP6110:
1.采用超细晶粒基体配合优异耐磨性涂层，具有优异的耐磨性；
2.适用于碳钢、合金钢、结构钢等材料的连续加工。
1.Use ultrafine grain matrix with excellent wear resistance coating，has excellent wearability;
2.Suitable for continuous processing of carbon steel, alloy steel, structural steel and other materials.

TP6210:
1.采用韧性好的富钴基体，配合强韧涂层，兼顾良好的耐磨性和抗崩性；
2.适用于碳钢、合金钢等材料的连续至一般断续工况的半精加工。
1.Use cobalt rich matrix with good toughness,match strong coating, has both wearablilty and collapse resistance.
2.Suitable for semi-finishing from continuous to general intermittent conditions of carbon steel, alloy steel, structural steel and other materials.

TP6310:
1.采用高强度与抗塑性变形基体，配合高韧涂层，韧性及抗崩性能大大提高；
2.适用于碳钢、合金钢等材料断续工况的轻型粗加工与粗加工。
1.Use high strength and resistance to plastic deformation matrix, match high toughness coating, toughness and collapse resistance are greatly improved.
2.Suitable for light roughing and roughing of carbon steel, alloy steel and other materials in intermittent working conditions.

实际加工案例 Actual Processing Case

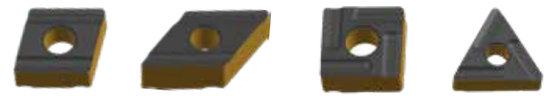
刀片型号 Insert Model	WNMG080408-PM3-TP6210
刀杆型号 Cutter Bar Model	MCLNR2020K08
加工材料 Processing Material	S45C 硬度HB250 S45C hardness HB250
线速度 Rotate Speed	V188m/min
每转进给 Feed	1.5mm/r
加工机床 Processing Engine Bed	斗山数车 Doosan CNC lathe
连续加工时间 Continuous Processing Time	280个工件 280 workpieces

总结：我司一个刀片位不转位，可连续加工280个工件，未崩，正常磨损，每个刀片位，加工时间稳定，日本某品牌，连续加工时间250个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 280 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 250 workpieces. Compare processing time and price, TG inserts are more cost-effective.

PM7车刀片 PM7 Steel Turning

刀片特点 Insert Feature



1.普通钢、合金钢半精加工断屑槽型；
2.大排屑槽，切削更流畅可实现不稳定工况切削；
3.切削深度范围宽，可实现大切深加工；
4.特有双刃槽设计保证锋利度的同时增强槽型强度，大切深工况不易崩刀。
1.Normal steel, alloy steel semi-finishing chip breaking trough type
2.Large chip chute,more smooth cutting for unstable cutting conditions
3.Wide range of cutting depth，can achieve large cut deep processing
4.The unique double-edged groove design ensures sharpness while enhancing groove strength,

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。
1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology，effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TP6110:
1.采用超细晶粒基体配合优异耐磨性涂层，具有优异的耐磨性；
2.适用于碳钢、合金钢、结构钢等材料的连续加工。
1.Use ultrafine grain matrix with excellent wear resistance coating，has excellent wearability;
2.Suitable for continuous processing of carbon steel, alloy steel, structural steel and other materials.

TP6210:
1.采用韧性好的富钴基体，配合强韧涂层，兼顾良好的耐磨性和抗崩性；
2.适用于碳钢、合金钢等材料的连续至一般断续工况的半精加工。
1.Use cobalt rich matrix with good toughness,match strong coating, has both wearablilty and collapse resistance.
2.Suitable for semi-finishing from continuous to general intermittent conditions of carbon steel, alloy steel, structural steel and other materials.

TP6310:
1.采用高强度与抗塑性变形基体，配合高韧涂层，韧性及抗崩性能大大提高；
2.适用于碳钢、合金钢等材料断续工况的轻型粗加工与粗加工。
1.Use high strength and resistance to plastic deformation matrix, match high toughness coating, toughness and collapse resistance are greatly improved.
2.Suitable for light roughing and roughing of carbon steel, alloy steel and other materials in intermittent working conditions.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	TNMG160404R-PM7-TP6210
刀杆型号 Cutter Bar Model	MTJNR2020K16
加工材料 Processing Material	20Cr 硬度HRC12 20Cr hardness HRC12
线速度 Rotate Speed	V140m/min
每转进给 Feed	0.4mm/r
切深 Cutting-in	2.2mm
连续加工时间 Continuous Processing Time	320个工件 320 workpieces

总结：我司一个刀片位不转位，可连续加工320个工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间300个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 320 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 300 workpieces. Compare processing time and price, TG inserts are more cost-effective.

MF3不锈钢车刀片 MF3 Stainless Steel Turning

刀片特点 Insert Feature

1.不锈钢精加工断屑槽型；
2.刃倾角设计，很好地控制切屑流向，有效抑制了积屑瘤形成，获得高质量的加工表面；
3.双前角三维槽型设计保证刀尖强度，提高切削锋利性和断屑能力。

1.Stainless steel finishing chip breaking groove type
2.Edge Angle design, control chip flow well,inhibit the formation of debris nodules effectively, obtain high quality machined surfaces.
3.Double front Angle three-dimensional groove design to ensure the strength of the tip,improve cutting sharpness and chip breaking ability

刀盘刀杆特点 Cutter Head,Cutterbar Feature

1.高强度合金钢刀体，真空淬火处理提高刀体强度与韧性。
2.热处理后进行刀片座精加工，保证刀体精度及刀片螺丝孔强度。
3.刀体特殊表面处理工艺，有效防止使用过程中刀体表面锈化。

1.High strength alloy steel insert body, vacuum quenching treatment improves the strength and toughness of the cutter body.
2.After heat treatment, the insert is finished, ensure the accuracy of the tool body and the strength of the insert screw hole.
3.Cutter body special surface treatment technology, effectively prevent the surface rust of the cutter body.

牌号特点及应用 Brand Feature and Application

TM5210:

1.全新双层纳米结构PVD涂层，搭配高耐磨性的硬质合金基体，提高耐磨性及红硬性。
2.适合于不锈钢材料的连续至一般断续工况精加工~半精加工。

1.New double-layer nanostructured PVD coating, match high wear resistance carbide matrix, improve wear resistance and red hardness
2.Suitable for continuous to general discontinuous condition finishing and semi-finishing of stainless steel material.

实际加工案例 Actual Processing Case

刀片型号 Insert Model	TNMG160408-MF3-TM5210
刀杆型号 Cutter Bar Model	MTJNR2020K16
加工材料 Processing Material	304SUS
线速度 Rotate Speed	120m/min
每转进给 Feed	0.15mm/r
切深 Cutting-in	1.2mm
连续加工时间 Continuous Processing Time	1500个工件 1500 workpieces

总结：我司一个刀片位不转位，可连续加工1500个工件，未崩，正常磨损，每个刀片位，加工时间稳定，国产某品牌，连续加工时间1200个工件。综合加工工件数量跟价格，我司刀片性价比较高。

Conclusion: A insert bit is not transposed in our company, it can continuous processing for 1500 workpieces,No burst,normal wear.The processing time is stable for each insert position.A well-known China brand, their products continuous processing time are 1200 workpieces. Compare processing time and price, TG inserts are more cost-effective.

MEMO