+ 华东大区
Eastern China Region

上海市青浦区华强街路三友星墅 203 弄272号 302 室
Add: Room 302, No. 272, Lane 203, Sanyou Xingshu
Huaqiang Street Road, Qingpu District, Shanghai
Tel: +86-0592-3706375

+ 华北大区
Northern China Region

天津市河东区海河东路与八经路交口以东八经路81号
中海钻石湾信和苑 11号楼1门4204室
Add: Room 4204, Gate 1, Building 11, xinheyuan, Diamond Bay
Hedong District, Tianjin, China
Tel: +86-0529-7306375

+ 华南大区
Southern China Region

广东省东莞市长安镇德政中路信义怡翠豪园9栋1单元902
Add: 902, Unit 1, Building 9, Xinyi Yicui Haoyuan
Dezheng Middle Road, Chang'an Town
Dongguan City, Guangdong Province
Tel: +86-0592-7310125

+ 东北大区
Northeast Region

辽宁省沈阳市铁西区建设东路158号华润铁西中心写字楼2109
Add: No.2109(china Resources Tiexi Center)No.158 Jianshe East Road
Tiexi District Shenyang City Liaoning Province
Tel: +86-0592-7301126

+ 西部大区
West Region

四川省成都市龙泉驿区成都航空职业技术学院
Add: Chengdu Aviation Vocational Technology College
Longquanyi District, Chengdu City, Sichuan Province
Tel: +86-0592-7301561

+ 华中大区
Central China Region

武汉经济技术开发区28R地块金色港湾4期26栋2号
Add: No. 2, Building 26, Golden Harbor Phase 4, Block 28R
Wuhan Economic and Technological Development Zone
Tel: +86-0592-7310203

厦门金鹭特种合金有限公司
XIAMEN GOLDEN EGRET SPECIAL ALLOY CO.,LTD.

地址：中国厦门市湖里区兴隆路69号
Add: No.69 Xinglong Road Huli District Xiamen CHINA
工厂地址：中国厦门同安工业集中区集成路1601-1629号
Factory Add: No.1601-1629 Jicheng Road Industrial
Concentration Area Tongan Xiamen CHINA
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GE202403f

厦门金鹭

2023

汽车行业加工解决方案

Manufacturing Solutions for Automotive Industry

厦门金鹭特种合金有限公司，成立于 1989 年，是一家中外合资的国家高新技术企业，隶属于中国六大稀土集团之一的厦门钨业股份有限公司。公司致力于高品质钨粉末材料、硬质合金、精密切削工具等钨系列产品的研发、生产，以及行业专业解决方案的提供，是世界知名的钨粉末、硬质合金及切削工具供应商。

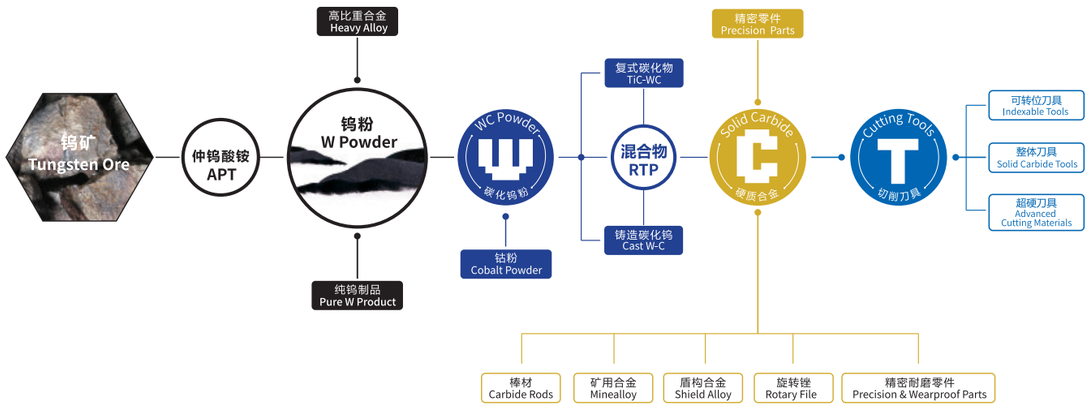
凭借完整钨产业链的产品集成技术研发，以及务实、创新的管理理念，厦门金鹭始终保持着强劲的发展势头，为全球用户提供最高性价比的产品和服务，为现代工业领域解决高硬度、耐高温、耐磨损问题，提供了优良的产品和完善的解决方案，客户遍布全球四十多个工业发达国家和地区，享誉海内外。

公司拥有国内 4 个生产基地和 1 个国家级企业研发中心，海外 3 个销售公司和 1 个海外生产基地，独立承担并完成多项“国家科技支撑计划项目”，“国家科技重大专项”，“国家火炬计划项目”，“国家重点新产品”开发项目及省市重点研究课题，被评为“战略性新兴产业骨干企业”、“创新型企业”、“先进技术企业”。

Xiamen Golden Egret Special Alloy Co., Ltd. (GESAC), founded in 1989, is a Sino-foreign joint venture with national high-tech, affiliated with XTC, which is one of six major rare earth groups in China. GESAC is committed to research & development, production and professional solutions providing of high-quality tungsten powder materials, cemented carbide, precision cutting tools and other tungsten products. Up to now, GESAC has become world-famous manufacturer and supplier of tungsten powder, cemented carbide and precision cutting tools products.

With the Integrated Product Development of complete tungsten industry chain, as well as a pragmatic and innovative management concept, GESAC has always maintained a strong momentum of development, providing the cost effective tungsten powder products and services for global users, offering the excellent products and perfect solutions for solving high hardness, high temperature resistance and wear resistance topics. Our brand "Golden Egret" has become one of the leading brand in the market, enjoying famous reputation in more than 40 countries and regions.

GESAC owns four production headquarters and one national level research center domestically,and three sales branches and one production base overseas. We undertook and completed several development programs independently, including the “National Science and Technology Support Programs”, the “National Torch Program Projects”, and the “National Key Projects” and so on. GESAC was awarded as "Key Enterprise for Strategic Emerging Industry ", “Innovative Enterprise" and "Enterprise with Advanced Technology ".



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加工解决方案
Manufacturing Solutions

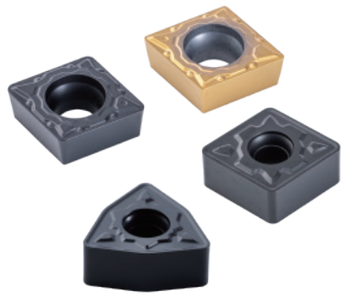
重点产品介绍
Introduction of Major Products

内铣 Internal Milling

- 高刚性、高精度刀体
  Cutter With High Rigidity And Precision
- 搭配CS1、CS2系列刀片，
  实现高效加工（详见P20）
  Matched with CS1, CS2 Series Inserts to Ensure Efficient Processing. (Details in P20)

车削加工 Turning

- 通用粗-精车削加工
  （详见《车削刀具产品册》）
  General Rough-finish Turning (Details in《The Catalogs Of Turning Tools》)

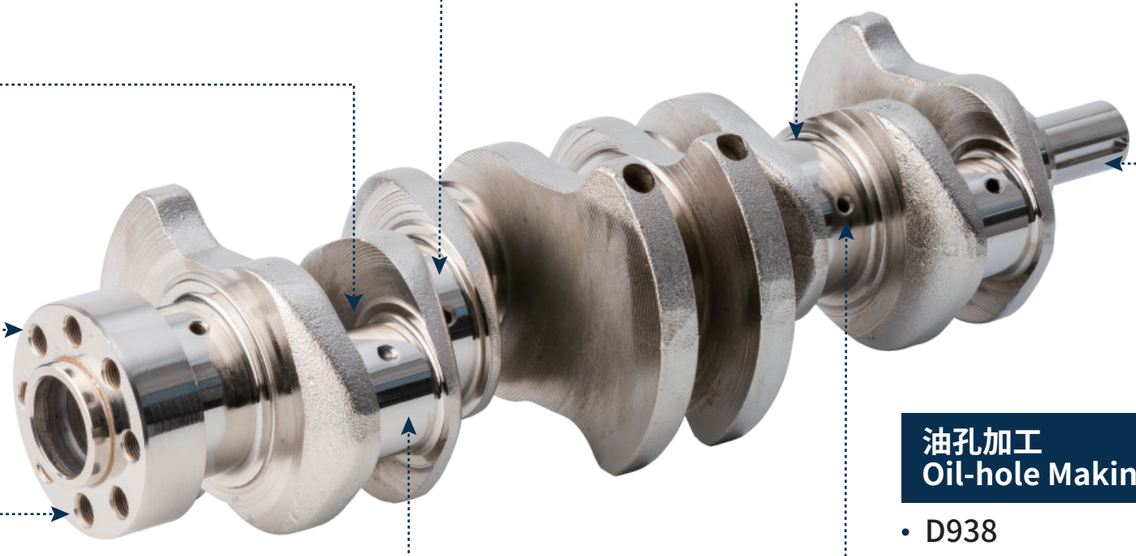


车车拉 Turn Turn Broaching

- 高刚性、高精度模块化刀体
  Modular Cutter With High Rigidity And Precision
- 刀片灵活布置，确保高效加工
  Flexible Inserts Arrangement Ensures High Productivity

端面铣削 Face Milling

- SNEU+MFB145/245/288
  高强度通用铣削
  High Intension General Face Milling



套车 Multistation Turning

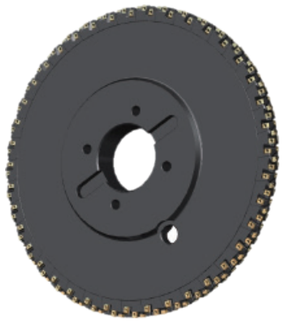
- 高效复合加工
  High Efficience Combination Tool

油孔加工 Oil-hole Making

- D938
  深孔内冷麻花钻（详见P25）
  Deep-hole Inner Cooling Twist Drill (Details in P25)

孔加工 Hole Making

- D918S
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- QPMG+GHDS
  高效可转位钻头
  High Efficiency Indexable Drills
- GUMD
  GUMD可换式钻头（详见P26）
  Head Changeable Drill (Details in P26)
- ET138-SJN
  钢用加工螺旋丝锥
  Steel Machining Spiral Fluted Tap

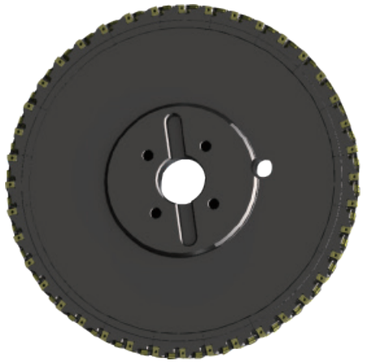


外铣 External Milling

- 高精度超密齿刀盘，实现高速、高效加工
  High Precision Super Dense Pitch Cutter Enable High Speed , High Precision Machining
- 减少换刀次数，降低成本
  Reduce Tool Change Frequency And Production Costs

外铣
External Milling

- 高精度超密齿刀盘，实现高速、高效加工（详见P20）
  High precision super dense pitch cutter enable high speed, high precision machining (Details in P20)

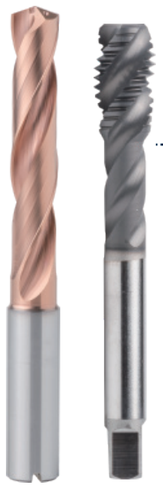


车削加工
Turning

- 通用轴颈车削加工（详见《车削刀具产品册》）
  General Turning for Journal
  (Details in《The Catalogs Of Turning Tools》)

孔加工
Hole Making

- **D918S**
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- **ET138-SJN**
  钢用加工螺旋丝锥
  Steel Machining Spiral Fluted Tap

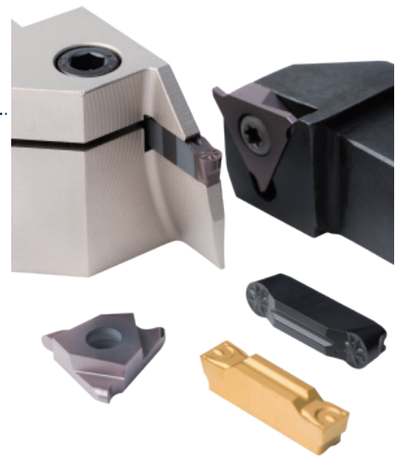


尾槽/VVT槽铣削
Slot Milling

- **UP210**
  通用钢件加工立铣刀
  General End Milling for Steel

端面铣削
Face Milling

- **SNEU+MFB145/245**
  高强度通用铣削
  High Intension General Face Milling



切槽加工
Grooving

- **MT+GK**
  通用切槽加工
  General Grooving
- **GB+GB**
  精密浅槽加工
  High Precision Shallow Grooving

外圆/内孔加工 Outer Circle & Internal Hole Machining

- **通用粗-精车削加工**
  General Rough-finish Turning
- **非标定制镗刀**
  Customized Combination Tool
- **非标定制套车**
  Combination Tool Increases Productivity

端面槽加工 Grooving

- **MT+GKFR/L**
  通用切槽加工
  General Grooving
- **GB+非标定制刀体**
  GB + Customized Cutter

环槽/V带槽加工 Grooving

- **非标定制槽刀（详见P21）**
  Combination Tool Increases Productivity (Details In P21)

法兰面铣削 Face Milling

- **HNKU+MFC145**
  高经济型通用铣削
  High Economical General Face Milling
- **ONEU+MFG140**
  高精加工平面铣削（详见P24）
  High Precision Face Milling (Details in P24)

打标面/U型孔加工 Shoulder Milling

- **SN200**
  高温合金高性能加工立铣刀
  High Performance Endmills for Heat Resistant Super Alloy
- **SS600**
  不锈钢高性能加工立铣刀
  High Performance Endmills for Stainless Steel
- **非标阶梯立铣刀**
  Customized Endmills

孔加工 Hole Making

- **D968S**
  不锈钢加工硬质合金麻花钻
  Drills for Stainless Steel Applications
- **非标定制阶梯钻**
  Customized Step Drill
- **非标定制铰刀**
  Customized Reamer
- **ET138-SJN**
  钢用加工螺旋丝锥
  Steel Machining Spiral Fluted Tap

衬套孔/凸台面加工 Shoulder Milling

- **SDKT+MES190**
  经济型正型4刃方肩铣削
  Economical Positive 4 Edges Shoulder Milling
- **非标定制锪刀**
  Customized Countersink

汽车行业加工解决方案 Manufacturing Solutions for Automotive Industry

车削加工 Turning

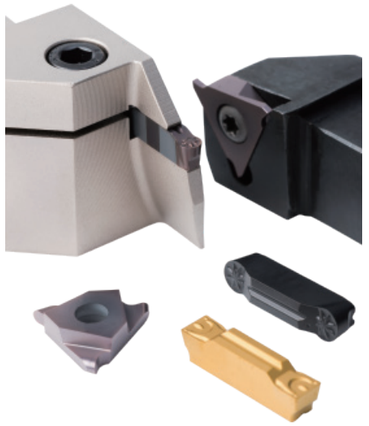
- 通用粗-精车削加工
  （详见《车削刀具产品册》）
  General Rough-finish Turning\
  （Details in《The Catalogs Of Turning Tools》）

油槽加工 Grooving

- 非标定制刀具CC09T3/TC1603
  （详见P22）
  Customized TCC09T3/TTC1603
  （Details in P22）

切槽加工 Grooving

- **MT+GK**
  通用切槽加工
  General Grooving
- **GB+GB**
  精密浅槽加工
  High Precision Shallow Grooving



销孔端面铣削 Pin Hole Face Milling

- **PP300**
  高效加工立铣刀
  High Efficiency Endmills
- **D938**
  深孔内冷麻花钻（详见P25）
  Deep-hole Inner Cooling Twist Drill (Details in P25)

内球面加工 Inner Sphere Making

- DCGW+非标定制减震刀杆
  DCGW + Customized Cutter

半轴齿轮面车削 Axle Shaft Gear Face Turning

- CCGT+非标定制减震刀杆
  CCGT + Customized Cutter

轴孔加工 Hole Making

- **QPMG+GHDS**
  高效可转位钻头
  High Efficiency Indexable Drills
- 非标定制铰刀
  Customized Straight Fluted Drill
- MB系列微小径精镗刀
  MB Mini Precision Boring Tool
- 非标定制可转位倒角铣刀
  Customized Chamfer Milling
- 非标定制反倒角铣刀
  Customized Back Chamfer Milling
- 非标定制环槽铣刀
  Customized Inner Ring Groove Milling

法兰孔加工 Hole Making

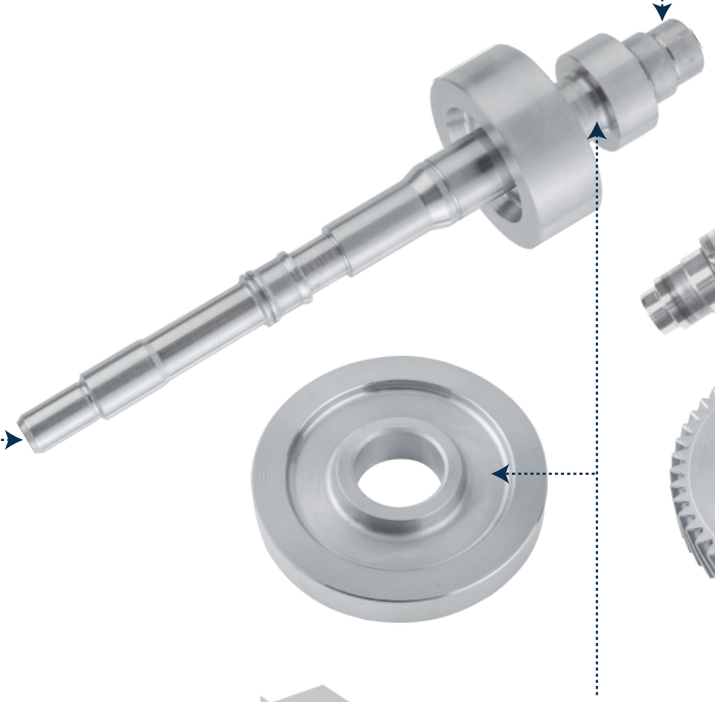
- **D918S**
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- **ET128-HJC**
  内冷铸铁加工直槽丝锥
  Internal Coolant Cast Iron
  Machining Straight Fluted Tap

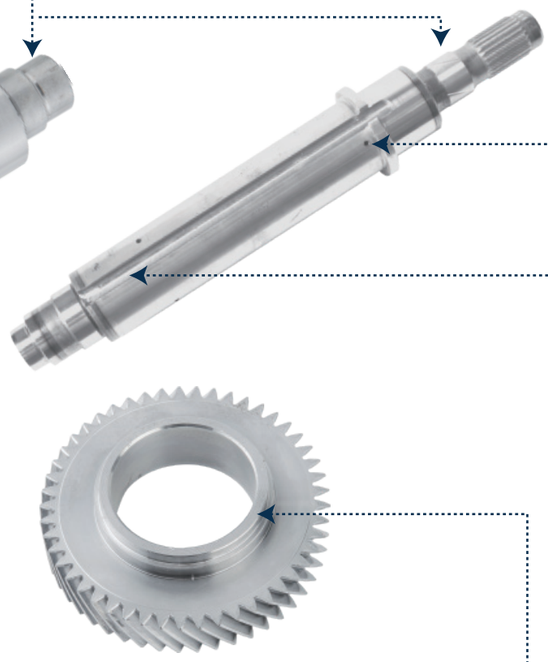
孔加工
Hole Making

- **D938**
  深孔内冷麻花钻
  Deep-hole Inner Cooling Twist Drill
- **D918S**
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- **GUMD**
  GUMD可换式钻头（详见P26）
  Head Changeable Drill (Details in P26)
- **QPMG+GHDS**
  高效可转位钻头
  High Efficiency Indexable Drills

车削加工
Turning

- 通用粗-精车削加工
  （详见《车削刀具产品册》）
  General Rough-finish Turning
  (Details in《The Catalogs Of Turning Tools》)



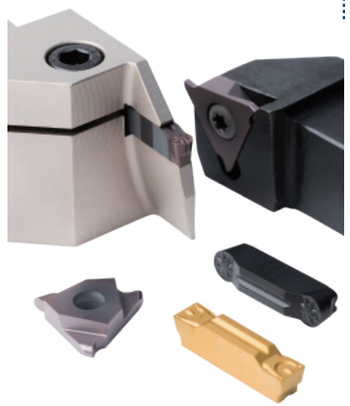


注油孔加工
Hole Making

- **D918S**
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications

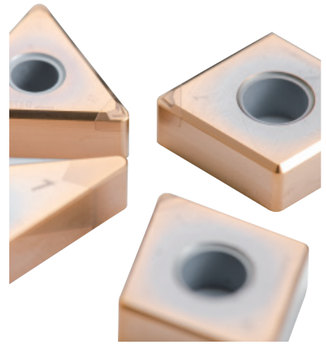
键槽加工
Grooving

- **SP210**
  键槽热前铣削加工
  Keyway Hot Front Milling
- **SH360**
  键槽热后铣削加工
  Keyway Hot Back Milling
- 非标定制锥度铣刀
  Customized Taper Milling Tools



切槽加工
Grooving

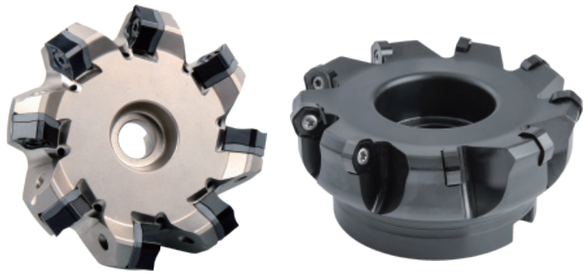
- **MT+GK**
  通用切槽加工
  General Grooving
- **GB+GB**
  精密浅槽加工
  High Precision Shallow Grooving



热后硬车
Turning after Annealing

- PCBN车削加工（详见P23）
  PCBN Turning (Details in P23)

汽车行业加工解决方案 Manufacturing Solutions for Automotive Industry



端面铣削
Face Milling

- SNMU+MFB145/245/288
  高强度通用铣削
  High Intension General Face Milling
- HNGU+MFC145/160
  高精度通用铣削
  High Precision Universal Milling

外圆铣削
Shoulder Milling

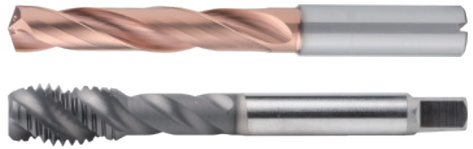
- APKT+MHB190
  曲线刃玉米铣削
  Helical Edge Corn Milling

主销孔加工
Hole Making

- QPMG+GHDS
  高效可转位钻头
  High Efficiency Indexable Drills
- GUMD
  GUMD可换式钻头（详见P26）
  Head Changeable Drill (Details in P26)
- RB/FB
  粗/精镗系统
  Rough/fine Boring System

沉台加工
Countersinking

- 非标定制锪刀
  Customized Countersink



销孔加工
Pin Hole Making

- D918S
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- ET138-SJN
  钢用加工螺旋丝锥
  Steel Machining Spiral Fluted Tap

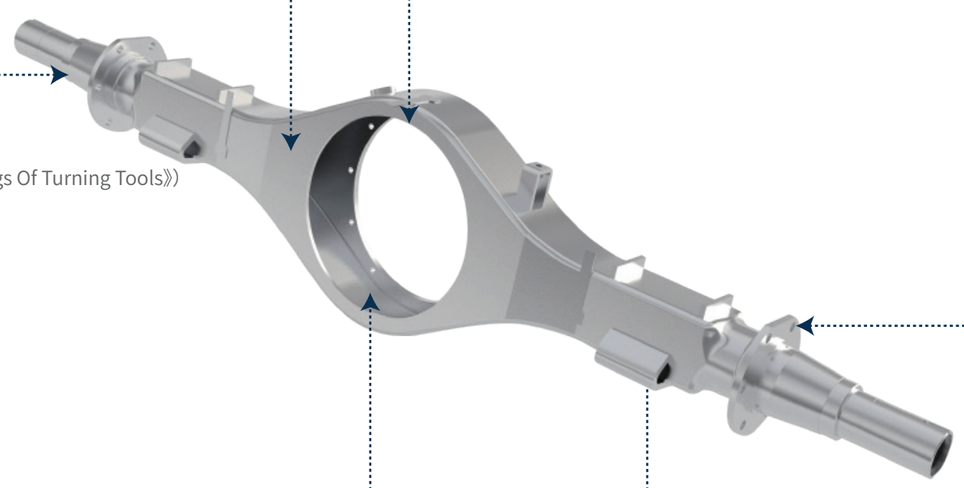
大盘面加工 Face Milling

- **HNKU+MFC145**
  高经济多功能面铣
  High Intension General Face Milling
- **HNGU+MFC145**
  高精加工平面铣削
  High Precision Face Milling

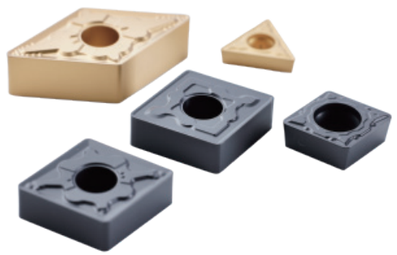
大盘面缺口加工 Side Milling

- **ANKX+MHC190**
  高强度玉米铣削
  High Strength Corn Milling
- **PP300**
  高效加工立铣刀
  High Efficiency Endmills for Steel

轴头/法兰盘加工 Turning



- 通用粗-精车削加工（详见《车削刀具产品册》）
  General Rough-finish Turning (Details in《The Catalogs Of Turning Tools》)



孔加工 Hole Making

- **D918S**
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- **QPMG+GHDS**
  高效可转位钻头
  High Efficiency Indexable Drills
- **GUMD**
  GUMD可换式钻头（详见P26）
  Head Changeable Drill (Details in P26)
- **ET138-SJN**
  钢用加工螺旋丝锥
  Steel Machining Spiral Fluted Tap

大盘面内孔加工 Hole Making

- **GBR-RB**
  粗镗刀
  Rough Boring System
- **GBR-FB**
  精镗刀
  Finish Boring System

板簧座面加工 Face Milling

- **SNEU+MFB288**
  高强度通用铣削
  High Intension General Face Milling

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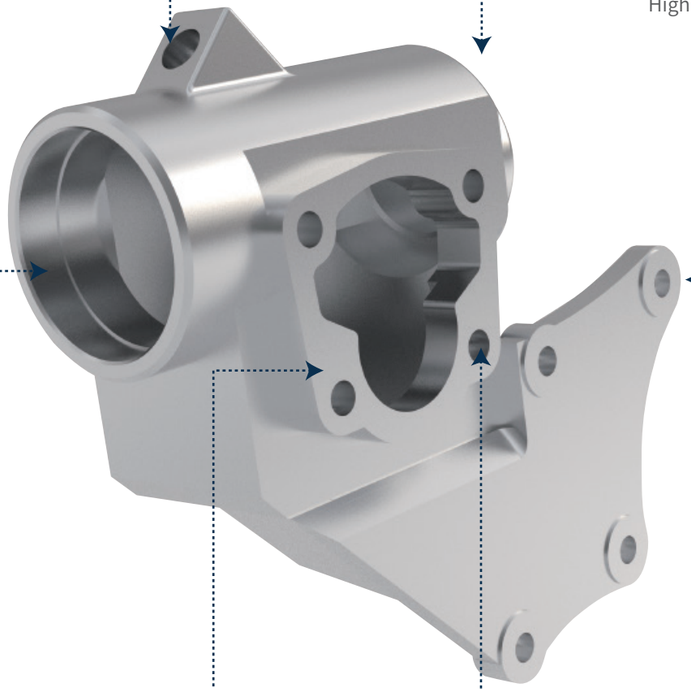
油孔加工 Oil-hole Making

- **D938**
  深孔内冷麻花钻（详见P25）
  Deep-hole Inner Cooling Twist Drill (Details in P25)

缸孔内槽加工 Grooving

- **MT+GKI**
  通用内孔槽加工
  General Inner Grooving
- **GNGP+GNA**
  内孔浅槽精加工
  High Precision Inner Grooving



缸孔加工 Hole Making

- **GBR-RB系列**
  粗镗刀
  Rough Boring System
- **GBR-FB系列**
  精镗刀
  Finish Boring System

销孔加工 Hole Making

- **QPMG+GHDS**
  高效可转位钻头
  High Efficiency Indexable Bit
- **GUMD系列**
  GUMD可换式钻头（详见P26）
  Head Changeable Drill (Details in P26)

端面铣削 Face Milling

- **SNMU+MFB145**
  通用面铣加工
  General Face Milling

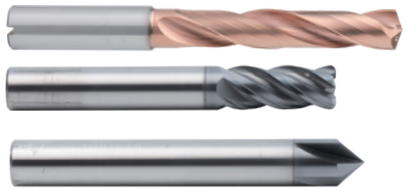
缸孔法兰面孔加工 Hole Making

- **非标定制阶梯钻**
  Customized Step Drill
- **高性能钢用丝锥**
  High Performance Steel Tap

汽车行业加工解决方案 Manufacturing Solutions for Automotive Industry

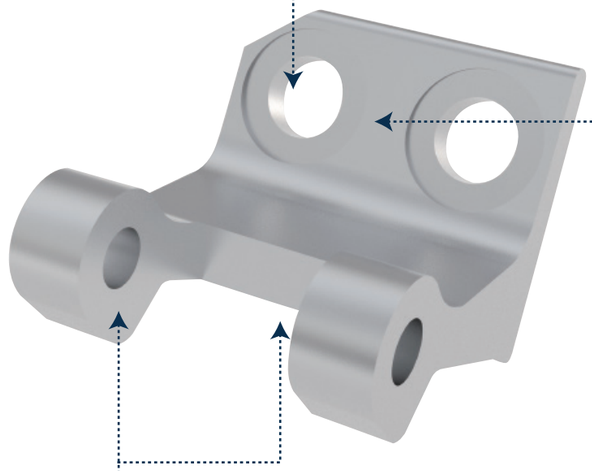
安装面加工
Mounting Surface Machining

- **D918S**
  普通钢加工硬质合金麻花钻
  Drills for Steel Applications
- **SP210**
  高效加工立铣刀
  High Efficiency End Mill
- **UP210**
  通用加工倒角铣刀
  Universal Machining Chamfered Milling Cutter
- **APMT+MEA190**
  正型两刃方肩铣
  Positive 2 Edges Shoulder Milling



孔加工
Hole Making

- **GUMD系列**
  GUMD可换式钻头（详见P26）
  Head Changeable Drill (Details in P26)
- **D968S**
  不锈钢加工硬质合金麻花钻
  Drills for Stainless Steel Applications
- 非标定制锪刀
  Customized Countsink
- 非标定制铰刀
  Customized Reamer



铣台面
Milling

- **SS600**
  高效加工立铣刀
  High Efficiency End Mill

底座面加工
Base Surface Machining

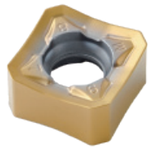
- **RDET+MPA100**
  高精正型平面铣削
  High Precision Positive Face Milling

方形孔加工
Hole Making

- **SP210**
  高效加工立铣刀
  High Efficiency End Mill

铣开档面
Milling

- **SNMU**
  双面八刃面铣刀具
  Double-sided Eight-edged Face Milling Blades
- **CNEU**
  三面刃铣削刀具
  Slot Milling Blades
- **TPGW**
  门铰链面铣专用刀具
  Door Hinge Face Milling Blades



曲轴内外铣刀具

Crankshaft internal and external milling tool

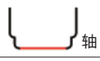
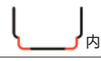
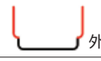
厦门金鹭对于直径150-750mm的内外铣刀盘，轴向及径向跳动精度控制在0.02-0.03mm以内，接受普通及可调式精铣刀夹定制，曲轴刀片尺寸关键尺寸精度可达±0.01mm，一致性控制标准0.008mm。

For 150-750mm diameter of the inner and outer milling cutter head, the axial and radial runout accuracy is controlled within 0.02-0.03mm, accept ordinary and adjustable finishing milling cutter clamp customization, crankshaft blade size key dimension accuracy up to ±0.01mm, consistency control standard 0.008mm.

目前已推出CS1及CS2系列刀片，其中CS1系列刀片刀尖强度高，适用于大余量柴油机曲轴加工，CS2系列刀片刃口锋利，适用于汽油机及小型柴油机曲轴加工。

At present, CS1 and CS2 series blades have been launched. CS1 series blades have high blade tip strength and are suitable for crankshaft processing of large surplus diesel engines. CS2 series blades have sharp edge and are suitable for crankshaft processing of gasoline engines and small diesel engines.

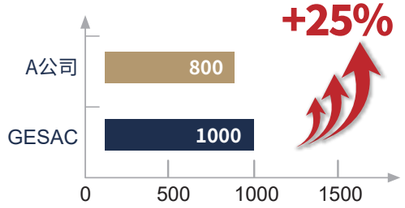
	刀片规格 Specification	CS1-N	CS1-D	CS1-Q	CS1-T
CS1系列刀片 CS1 series blades （非标定制） (Customization)	刀片外形 Shape				
	加工部位 Processing site	 轴 颈	 内 档	 外 档	 沉割槽

	刀片规格 Specification	CS2-N	CS2-D	CS2-Q	CS2-T
CS2系列刀片 CS2 series blades （非标定制） (Customization)	刀片外形 Shape	 N1	 D1	 Q1	 T1
		 N2	 D2	 Q2	 T2
	加工部位 Processing site	 轴 颈	 内 档	 外 档	 沉割槽

曲轴外铣加工 Crankshaft external milling machining	
刀具规格 Specification	LNE141109M、LNE221107M
加工材料 Material	SAE1538MV (27-33HRC)
切削速度 Cutting speed	Vc=220m/min
每转给量 Feed	f=0.37mm/r
切削量 Cutting amount	ap=1.5-2.5mm
切削方式 Cutting method	外铣加工 External milling
冷却方式 Cooling method	干切 Dry cut


工件加工

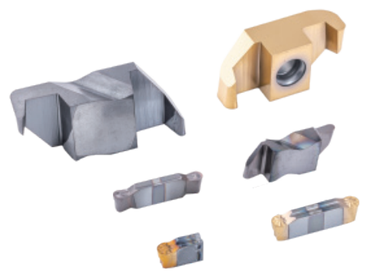

机床加工



刀具寿命/件 Tool life/pcs

V带槽刀

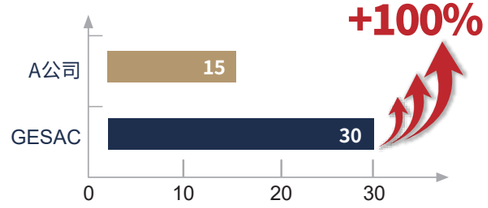
Non-standard ring groove knife



产品特点 Product features:

- 多次修磨，极大限度提升经济性
  Repairable and grindable, greatly improving economy
- 常备通用毛坯，满足不同机型成型尺寸快速定制需求
  General-purpose blanks are always in stock to meet the needs of rapid customization of molding sizes for different models
- 多种刀片形式，满足不同加工深度、避让选择需求
  Various blade forms to meet the needs of different processing depths and collision avoidance options
- 可根据工况进行针对性的牌号搭配。
  Targeted brand matching can be carried out according to working conditions

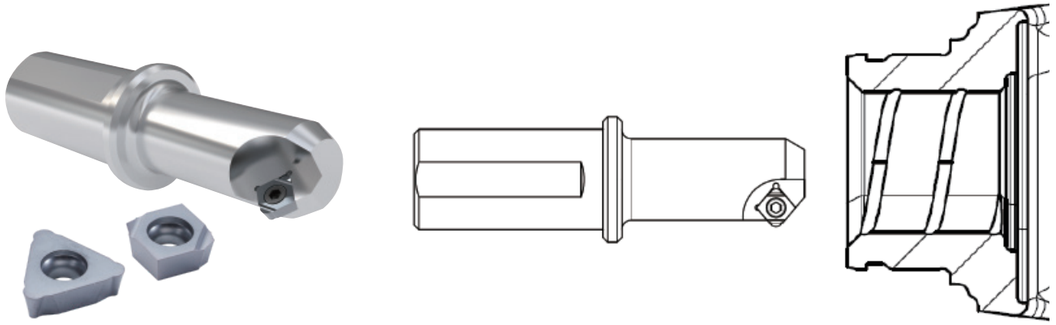
涡轮增压壳外环槽加工 Turbocharged shell outer ring groove machining	
刀具规格 Specification	KNEU31440820R-GST7115
加工材料 Material	1.4848（HB200）
切削速度 Cutting speed	N=380RPM Vc=110~130m/min
进给量 Feed rate	F=55mm/min fr=0.13~0.15mm/r
切削量 Cutting amount	ap=3mm
切削方式 Cutting method	外环槽粗加工 Rough machining of outer ring groove
冷却方式 Cooling method	水基乳化液/外冷 Water-based emulsion/external



刀具寿命/件 Tool life/pcs

差速器壳体油槽加工刀具

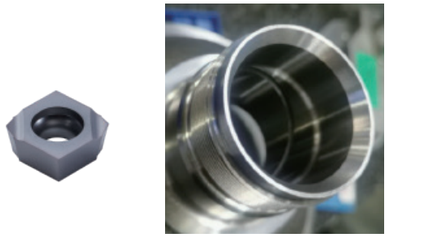
Differential housing oil groove processing tool

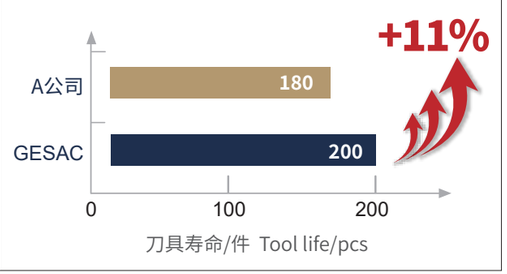


产品特点
Product features:

- 刀尖根据油槽尺寸进行非标定制
  The tool tip is customized according to the size of the oil groove
- 搭配韧性优异的牌号GM3225
  With excellent toughness brand GM3225
- 多刃口设计，提升加工产品经济性
  Multi-edge design, improve the economy of processed products
- 常备基体库存，交货周期短
  The matrix stock is always available, the delivery time is short

差速器油槽加工 Differential housing oil groove machining	
刀具规格 Specification	PTCCET09T320-GM3225
加工材料 Material	45#（HRC20）
切削速度 Cutting speed	N=680r/min Vc=108m/min
进给量 Feed rate	F=55mm/min Fn=0.08mm/rpm
切削量 Cutting amount	ap=0. 3mm（分10刀）
切削方式 Cutting method	内圆车削 Inner hole turning
冷却方式 Cooling method	水基乳化液/外冷 Water-based emulsion/external





可转位涂层PCBN刀具二代牌号

Indexable coating PCBN tool second generation

BHC210P/BHC225P H

稳定性 Stable

工艺升级 Process Upgrade

采用全CBN焊片，去除硬质合金衬底，提升焊接稳定性，进一步强化产品切削加工稳定性。
The use of all cbn material, no hard alloy substrate, improve the welding stability, further strengthen the product machining stability

耐磨性 Wear

涂层升级 Coating Upgrade

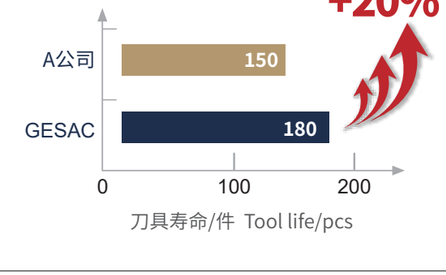
第二代PCNB涂层，TiAlSiN涂层，抗化学磨损性能好，提升高线速度下的使用寿命。
The second generation of PCNB coating, TiAlSiN coating, good chemical wear resistance, improve the service life of high line speed.

经济 Economy

新增系列 New Series

第二代PCNB涂层，TiAlSiN涂层，抗化学磨损性能好，提升高线速度下的使用寿命。
The second generation of PCNB coating, TiAlSiN coating, good chemical wear resistance, improve the service life of high line speed.

齿轮轴加工 Gear shaft machining	
刀具规格 Specification	PCNGA120408LS-2-BHC210P
加工材料 Material	20CrMnTi（HRC55-60）
切削速度 Cutting speed	N=1200rpm Vc=238-417m/min
进给量 Feed rate	F=240mm/min Fn=0.2mm/rpm
切削量 Cutting amount	0.2-0.25mm
切削方式 Cutting method	外圆（D63-110）连续精加工 Continuous finishing of outer circle (D63-110)
冷却方式 Cooling method	水基乳化液/外冷 Water-based emulsion/external



汽车行业加工解决方案 Manufacturing Solutions for Automotive Industry

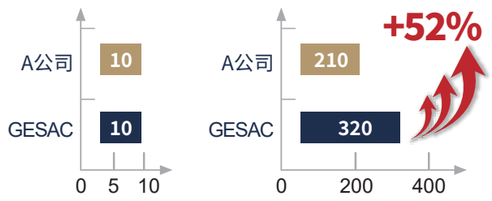
ONEU面铣精加工刀具

ONEU face milling finishing tool

产品特点
Product features:

- 双面十六刃刀片极大限度提升经济性
  Double-sided sixteen-edged blades greatly improve the economy
- 不等齿距刀盘减轻加工震刀
  Unequal tooth pitch cutter head reduces machining vibration
- 40度面铣加工黄金主偏角
  40 ° face milling processing gold main deflection angle
- 刀片自带修光刃保证加工表面Ra<1.0
  The blade comes with a wiper edge to ensure the processed surface Ra<1.0
- 高精度刀盘+精磨刀片轻松实现精加工
  High-precision cutter head + fine-grinding blade to easily achieve finishing

排气歧管面铣加工 Exhaust manifold surface milling	
刀具规格 Specification	ONEU050410E-SF-GM2140 MFG140-125R08（装4片）
加工材料 Material	1.4837（HB200-250）
切削速度 Cutting speed	N=800RPM Vc=315m/min
进给量 Feed rate	F=320mm/min fz=0.1mm/z
切削量 Cutting amount	ap=0.3mm
切削方式 Cutting method	面铣精铣 Finish face milling
冷却方式 Cooling method	水基乳化液/外冷 Water-based emulsion/external



D938深孔内冷麻花钻

D938 Series Deep Hole Internal Coolant Twist Drill

全新的基体材质
New substrate material

- 韧性和耐磨损性的完美平衡
  Perfect balance between toughness and wear resistance

双刃带
Double cutting relief

- 具有优良的导向性
  With excellent directivity

AlTiN-nano涂层
AlTiN-nano Coating

- 优异的红硬性和抗氧化性
  High heat resistance and high resistance to oxidation

柄部标准
Standard

- 基于DIN6535HA标准设计
  The shank is designed in accordance with DIN6535HA Standard

刃径精度
Cutting Diameter accuracy

- 采用h7公差精度等级
  h7 tolerance accuracy class

短涂层
Short Coating

- 超低表面摩擦系数
  Ultra low surface friction coefficient

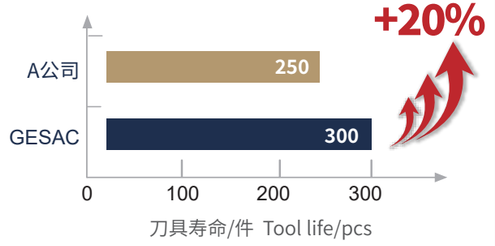
D938系列钻尖
D938 Series Drill Tip

- 超强的自定心性能和断屑性能
  Superior self-centering and chipbreaking performance

超光滑排屑槽
Super smooth chip flute

- 超低表面摩擦系数
  Ultra low surface friction coefficient

曲轴深孔加工 Crankshaft deep hole machining	
刀具规格 Specification	D938-A20C-0400
加工材料 Material	42CrMo（HRC26-33）
切削速度 Cutting speed	N=3100RPM Vc=39m/min
进给量 Feed	F=341mm/min Fz=0.11mm/z
孔深 hole depth	70mm
切削方式 Cutting method	引导钻预钻孔＋一钻到底 Guided drilling pre-drill + one drill to the bottom
冷却方式 Cooling method	水基乳化液/内冷 Water based emulsion/external cooling



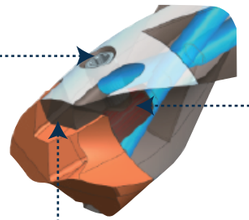
汽车行业加工解决方案 Manufacturing Solutions for Automotive Industry

GUMD皇冠钻

GUMD Modular drill

锁紧可靠 Reliable locking

- 卡槽及防松设计
  Special locking design
- 避免刀头脱落
  Avoid drill tip falling off



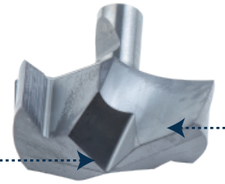
精度可靠 Reliable accuracy

- 销与孔紧密配合
  The pin fits closely with the hole

受力可靠 Reliable stress

- 扭矩传递面特殊设计
  Special design of torque transmission surface
- 确保扭矩稳固传输
  Ensure stable torque transmission

高强度钻尖设计 High strength drill tip design



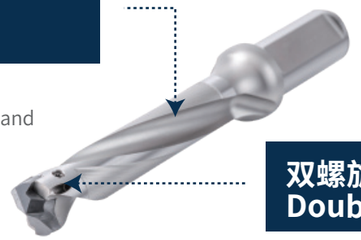
- 定心性能好
  Prefect centering capacity

通用刃型设计 Universal edge design

- 兼顾P/K/M断屑与强度
  Considering P/K/M chip breaking and strength

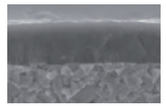
变螺旋排屑槽 Variable flutes

- 兼顾切削效果及钻体刚性
  Take into account the cutting effect and drill body rigidity



双螺旋内冷孔 Double helix internal cold

- 提高冷却液流量
  Increase cooling flow

材质 Material	加工材料 Work materal		
	P	M	K
GM3225(较硬Harder)	● 耐磨 Wear resistant	○	○
GPD7115(韧性Toughness)	● 韧性 Toughness		

❶ **材质GM3225**

适用通用材料，在耐磨性要求较高工况性能优异

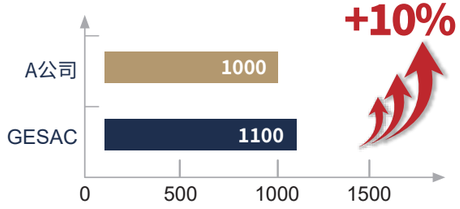
It is suitable for general purpose material, and has excellent performance in high abrasion resistance condition

❷ **新材质GPD7115** NEW

在钢材韧性要求较高工况性能卓越

Excellent performance in the steel toughness requirements of higher conditions

差速器壳体轴孔加工 Differential housing shaft hole machining	
刀具规格 Specification	刀头：GUMD185-PKM-GM3225 钻杆：GUMD-180-5D-F25S
加工材料 Material	QT600（HB240-260）
切削速度 Cutting speed	N=1100RPM Vc=63m/min
进给量 Feed rate	F=280mm/min Fz=0.25mm/z
孔深 hole depth	15mm
切削方式 Cutting method	一钻到底 one drill to the bottom
冷却方式 Cooling method	水基乳化液/内冷 Water-based emulsion/external



汽车行业加工解决方案 Manufacturing Solutions for Automotive Industry

MEMO

MEMO