



## Metal Cutting

服务先行 专业管家

PROFESSIONAL BUTLER SERVICE FIRST



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- ▶ MC 一站式服务提供商，  
提供 360° 全方位无死角服务，  
让客户省心、省力、省钱！
- ▶ MC-STOP SERVICE PROVIDER,  
OFFERING A 360 ° SERVICE NO DEAD ENDS,  
CUSTOMERS PEACE OF MIND, EFFORT AND MONEY!

## → 公司简介

### COMPANY PROFILE

河南优德超硬工具有限公司是集生产研发专业金属切削刀具、PCD/PCBN 刀具、合金涂层刀具，作为刀具管理服务于一体的企业。公司拥有经验丰富的科研团队，先进的管理体制和完善的产品服务体系。我们的研究来自客户的要求和行业的需求，优德公司提供的高质量，高性价比的专业刀具和热情真挚的服务赢得了广大客户的信任和支持。

公司的创始人，毕业于德国布伦瑞克理工大学，获得博士学位，他带领的科研团队的研发能力位于行业前列，并将与世界潮流并驾齐驱。现代化的管理是公司不断发展的动力。完善的管理体制，科学的管理方法保障了公司的稳步发展。公司以广阔的服务网络和完善的服务体系为客户解决后顾之忧！

河南优德超硬工具有限公司以技术的不断创新为动力，以完善的售后服务体系为渠道，竭诚为您提供专业、先进的产品和服务。

Henan UHD Ultrahard Tools Co., Ltd is an enterprise that integrates the production, research and development of professional metal cutting tools, PCD/PCBN tools, alloy coating tools, and tool management services. The company has an experienced scientific research team, advanced management system and perfect product service system. Our research comes from customer requirements and industry needs. The high-quality, cost-effective professional tools and enthusiastic and sincere services provided by UHD Company have won the trust and support of our customers.

The founder of the company graduated from the Technical University of Braunschweig in Germany and received a doctorate. The research and development capabilities of the scientific research team he leads are at the forefront of the industry and will keep pace with world trends. Modern management is the driving force for the company's continuous development. The perfect management system and scientific management methods ensure the company's steady development. The company solves customers' worries with its vast service network and complete service system!

Henan UHD Ultrahard Tools Co., Ltd takes continuous technological innovation as its driving force and a complete after-sales service system as its channel to wholeheartedly provide you with professional and advanced products and services.

## → 企业文化

### COMPANY CULTURE

◎ **Corporate culture:** work together to innovate and win-win.  
企业文化：合力同行，创新共赢。

◎ **Corporate mission:** With technological innovation as the core driving force, focusing on the challenges and pressures that customers are concerned about, and providing the most competitive solutions and services, Continue to create maximum value for customers and contribute to industry development.

企业使命：以科技创新为核心推动力，聚焦客户关注的挑战和压力，提供最具竞争力的解决方案和服务，持续为客户创造最大价值，为产业发展贡献力量。

◎ **Corporate philosophy:** integrity, innovation, service, win-win, perfection and sincerity  
企业理念：诚信、创新、服务、共赢、至善至诚

◎ **Team spirit:** cooperation, unity, endurance, hard work, perseverance, harmony  
团队精神：合作、团结、耐力、拼搏、执着、和谐

◎ **Corporate purpose:** Create social value and contribute to the development of China's mechanical tool industry!  
企业宗旨：创造社会价值，为中国机械刀具产业发展贡献力量！

## Who is UHD? 竞心·竞力·竞未来

**Competitiveness • Competition • Competition for the future**

河南优德超硬工具有限公司是集生产研发专业金属切削刀具、PCD/PCBN 刀具、合金涂层刀具于一体的，具有需求→设计→制造→销售与服务，全套解决方案的专业刀具服务商。自公司成立以来，一直秉承“客户至上、质量至佳、服务至诚，效率至高”的服务宗旨，以“机动灵活设计服务、全生命周期产品管理服务、模块式管理服务 和属地化终身服务”为特色，坚持以技术的不断创新为动力，以先进的管理为保障，以完善的售后服务体系为渠道，打造河南首家具有专业刀具解决方案能力的“专业刀具服务管家”！

公司拥有经验丰富的科研团队，先进的管理制度和完善的产品服务体系，最大程度上为客户提供至善至美的服务。“创立优德，就是要为中国机械加工行业提供精良刀具，为中国制造业发展贡献力量！”这是毕业于德国布伦瑞克理工大学，获得机械设计专业博士的公司创始人最初的梦想。近年来，他带领的科研团队的研发能力一直位于行业前列，在业界赢得较高赞誉和口碑！

选择 UHD，就是选择专业、高效率和高附加值！  
选择 UHD，就是选择一步到位的刀具解决方案！

Henan UHD Ultrahard Tools Co., Ltd. is a professional tool service provider that integrates the production and research and development of professional metal cutting tools, PCD/PCBN tools, and alloy-coated tools. It provides a full set of solutions including demand→design →manufacturin→sales and service. Since the establishment of the company, it has been adhering to the service tenet of "customer first, quality first, sincere service, and efficiency highest", with "mobile and flexible design services, full life cycle product management services, modular management services and localized lifelong services" as its core Characteristics, insisting on continuous technological innovation as the driving force, advanced management as the guarantee, and the perfect after-sales service system as the channel, to create Henan's first "professional tool service butler" with professional tool solution capabilities!

The company has an experienced scientific research team, advanced management system and perfect product service system to provide customers with the most perfect service to the greatest extent. "The purpose of founding UHD is to provide excellent cutting tools for China's mechanical processing industry and contribute to the development of China's manufacturing industry!" This was the original dream of the company's founder, who graduated from Braunschweig University of Technology in Germany and received a doctorate in mechanical design. In recent years, the research and development capabilities of the scientific research team he leads have been at the forefront of the industry, winning high praise and reputation in the industry!

Choosing UHD means choosing professionalism, high efficiency and high added value!  
Choosing UHD means choosing a one-step tooling solution!



Metal Cutting

专业刀具服务管家  
Professional Tool Expert

→ 专业刀具服务管家

PROFESSIONAL SERVICE TOOL EXPERT

Flexible design capabilities + full life cycle product management + modular management services + localized lifelong services

灵活机动设计能力 + 全生命周期产品管理 + 模块式管理服务 + 属地化终身服务



Flexible and maneuverable design capabilities -灵活机动设计能力

- Professional team, flexible, customer first, innovative and efficient
- Personalized solutions
- Complete solution
- Scheme design, product manufacturing, product transportation, application teaching assistance, Second-hand new knife repurchase, industrial engineering management services, production management consulting services.
- 专业团队，灵活机动，客户至上，创新高效
- 个性化解决方案
- 全套解决方案
- 方案设计、产品制造、产品运输、应用教学帮助、二手新刀回购、工业工程管理服务、生产管理咨询服务



Full life cycle product management -全生命周期产品管理

- Investment period - procurement management
- Use period - inventory management, process management, basic data Data management, tool on-site management
- Scrap period - tool sharpening management, tool damage reporting management.
- 投入期——采购管理
- 使用期——库存管理、工艺管理、基础数据管理、刀具现场管理
- 报废期——刀具刃磨管理、刀具报损管理



Modular management services -模块式管理服务

- Product modules: exclusive industrial design, customized tool development and production, copy processing, Lean Manufacturing, Quality Assurance (QA), Quality Improvement (QI), New 5S Standards.
- Service modules: production management consulting services, marketing consulting services, human resources Management consulting services, industry consulting services.
- Management module: intelligent factory management, remote production management control, full production and marketing Process ERP management, mature and efficient organizational model.
- Personnel module: human resources and technical support from well-known universities and research institutes at home and abroad, Vocational and job training and identification, and talent orientation training in professional colleges.
- 产品模块：专属工业设计、定制化刀具开发生产、仿型加工、精益制造、质量保障 (QA)、质量改善 (QI)、新 5S 标准。
- 服务模块：生产管理咨询服务、营销咨询服务、人力资源管理、行业咨询服务。
- 管理模块：智能化工厂管理、远程生产管理控制、产销全过程 ERP 管理、成熟高效组织模式。
- 人员模块：海内外知名院校及研究所的人力、技术支持、职业与岗位培训和鉴定、专业院校的人才定向培养。



Localized lifelong service -属地化终身服务

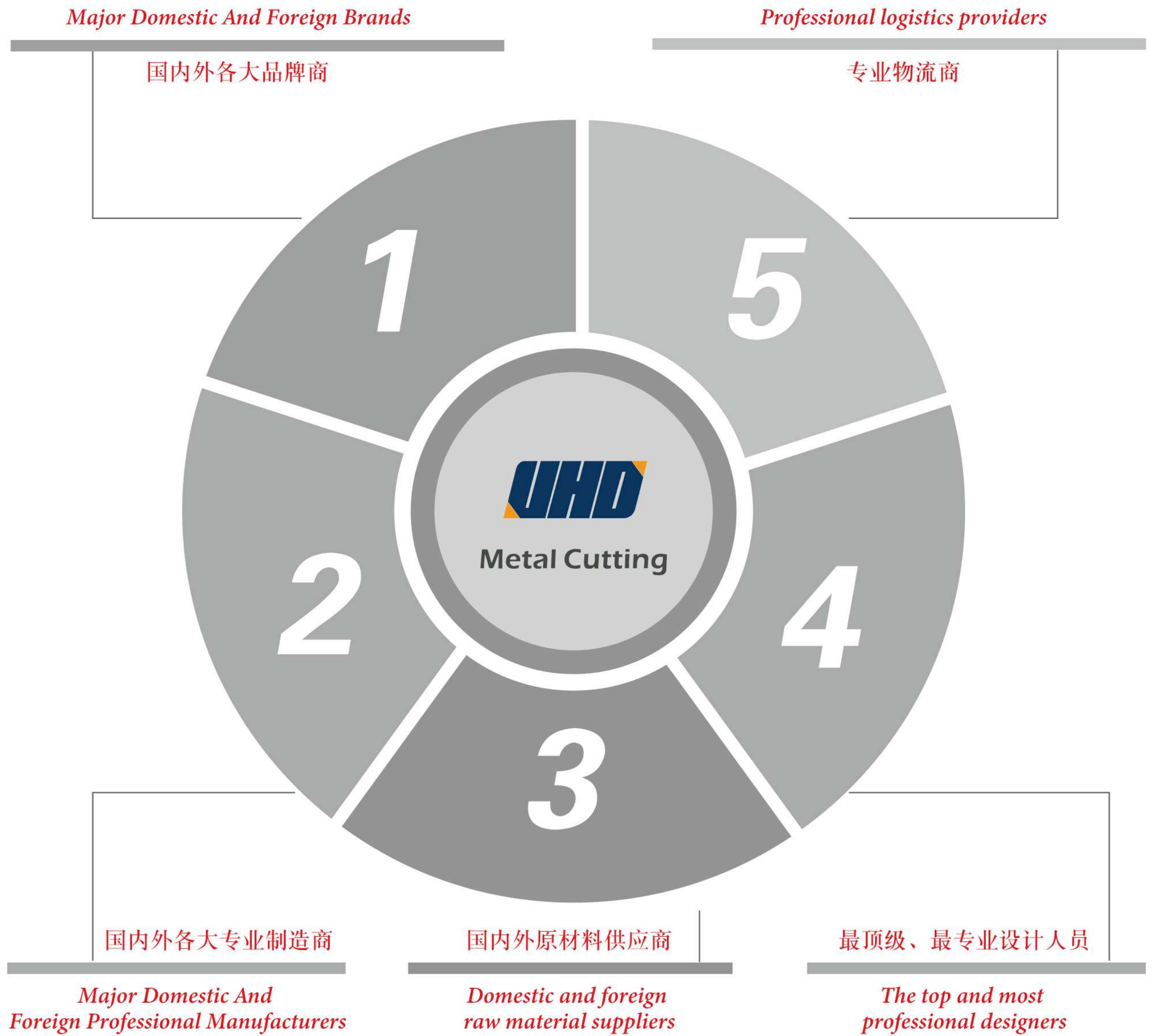
- Lifetime warranty
- 24 door-to-door services a year
- Guaranteed recycling of tool residual value after use
- UHD permanently provides free operator training to users
- 终身保修
- 一年 24 次上门服务
- 刀具使用终结余值保障回收
- UHD 永久向用户提供操作人员免费培训

→ 专业刀具解决方案服务商

SPECIALIZED TOOLING SOLUTIONS PROVIDER

UHD has the ability to integrate professional tool resources, and has "high-precision" brands, manufacturers, raw material suppliers, logistics providers, etc. in the industry. It can provide customers with overall professional tool solutions and solve the problems of finding suppliers and judging supply. A series of issues such as suppliers, negotiating suppliers, running-in suppliers and maintenance suppliers, etc., simply and effectively allow customers to have the most suitable tool products for their needs!

UHD 具有专业刀具资源整合能力，拥有行业内“高精尖”的品牌商、制造商、原材料供应商、物流商等，可为客户提供整体专业刀具解决方案，解决客户因寻找供应商、判断供应商、洽谈供应商、磨合供应商和维护供应商等一系列问题，简单有效的让客户拥有最贴切需求的刀具产品！



## → 成型刀具系列

### PROFILE TOOL SERIES

In recent years, with the development of our country's manufacturing industry, various manufacturers have paid more attention to the efficiency and cost of parts processing while continuously improving product quality and performance. The forming tool series has the characteristics of stable performance and high production efficiency, and is favored by customers. In order to meet the actual needs of different customers, we have been committed to the development and upgrading of new products. These products have been widely used in aerospace and automobile manufacturing, medical equipment and other fields of processing, and achieved remarkable results.

近年来，随着我国制造业的发展，各制造厂家在不断提高产品质量和性能的同时，更加关注零部件加工的效率和成本。成型刀具系列具有使用性能稳定、生产效率高等特点，备受广大客户的青睐，为了满足不同客户的实际需求，我们一直致力于新产品的研发和升级，这些产品已广泛应用于航空航天、汽车制造、医疗器械等领域的加工，并取得显著效果。



## → 槽刀系列

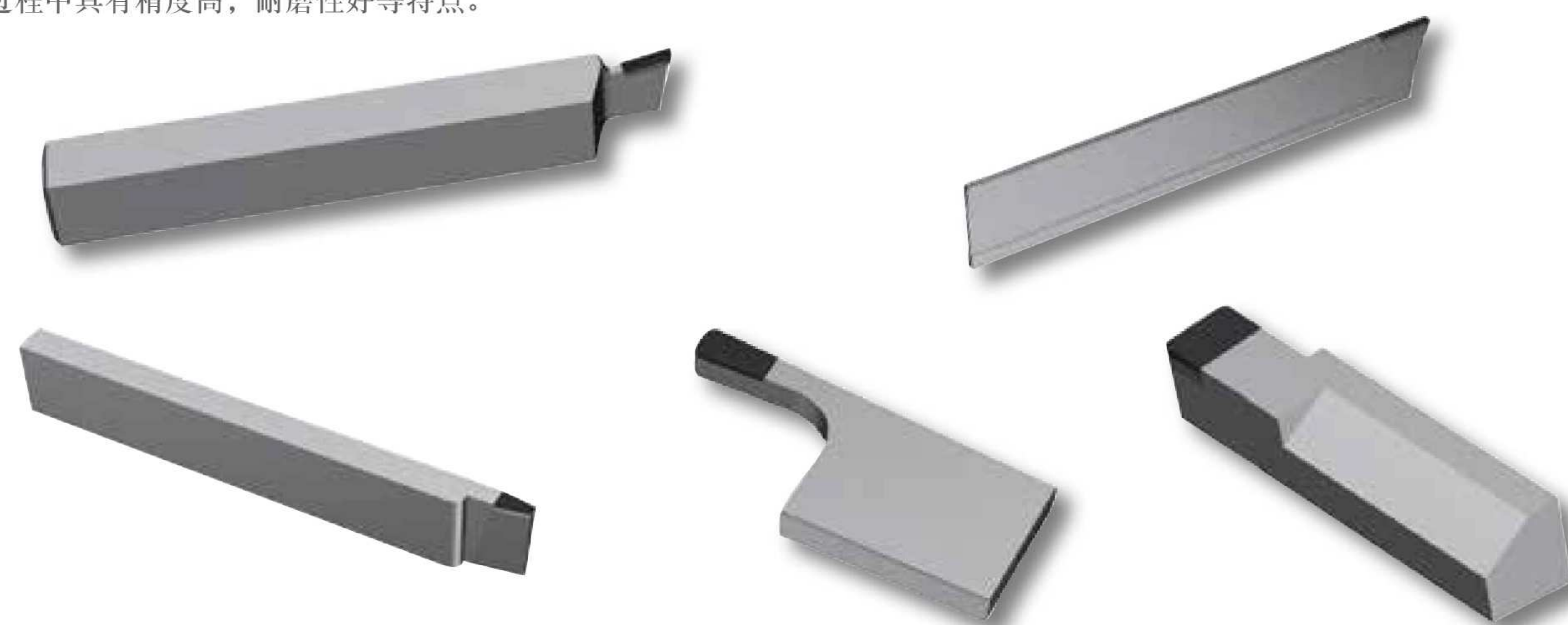
### GROOVING TOOLS SERIES

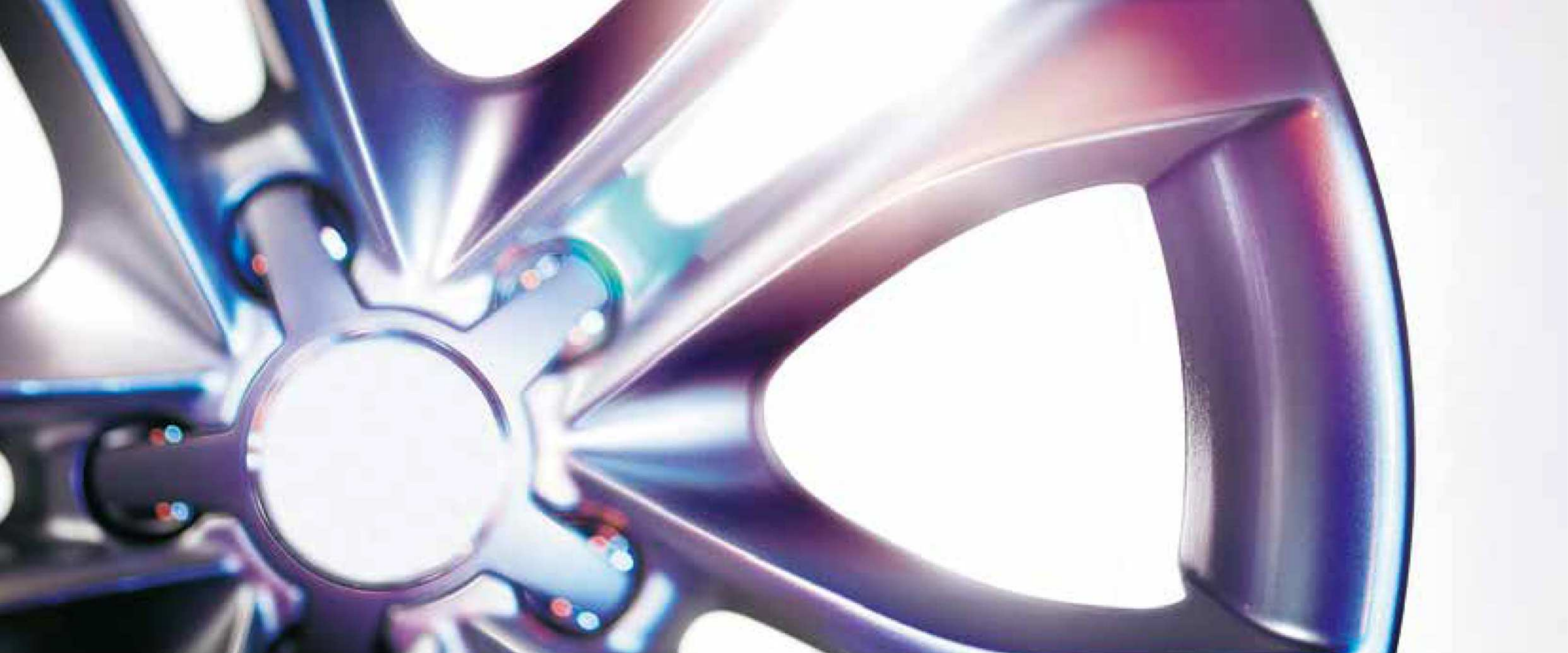
In the gear industry and air-conditioning compressor industry, PCBN series groove cutters are mainly used for finishing machining of hardened steel and cast iron. For example, in the process of processing gears with a hardness of HRC58-62, the finishing of grooves, outer diameter of the gears, the inner hole and end face achieves the effect of turning instead of grinding, of turning instead of grinding. Air-conditioning compressors have strict requirements on the accuracy of machining tools. The use of high wear-resistant PCBN tools can improve the surface machining accuracy, save production costs, and improve work efficiency. Currently, hardened steel and cast iron processing technologies have been widely used in this industry.

The PCD/PCBN groove cutter series can be used to process piston ring grooves. Since the piston works under high temperature, high pressure and high wear resistance, its profile accuracy and surface roughness are extremely demanding. The cutting tool has the characteristics of high precision and good wear resistance during processing.

在齿轮行业和空调压缩机行业中，PCBN 系列槽刀主要针对淬硬钢和铸铁两类材质的精加工，如在齿轮 HRC58-62硬度的加工过程中，可实现对齿轮的槽部、外径、内孔及端面的精加工，达到以车代磨的效果。而空调压缩机对加工刀具的精度要求严格，采用高耐磨性 PCBN 刀具，可提高表面的加工精度，节约了生产成本，提高了工作效率，目前淬硬钢和铸铁加工技术都已在此行业内广泛使用。

PCD/PCBN 槽刀系列可用于加工活塞环槽，由于活塞在高温高压高耐磨的条件下工作，对其轮廓精度和表面粗糙度要求极高。刀具在加工过程中具有精度高，耐磨性好等特点。





## → 轮毂刀系列

### WHEEL HCLB TOOL SERIES

The hub cutter is made of PCD material, which has good thermal conductivity and excellent impact resistance, and can achieve heavy cutting and intermittent cutting. The unique edge treatment can realize the extrusion-turning process during the machining process, which can make up for the defects of casting micropores and improve the cutting accuracy and surface finish in high-speed cutting.

轮毂刀具采用 PCD 材质，具有良好的导热性能，耐冲击性极佳，可实现重切削及断续切削。而独特的刃部处理能在加工过程中实现挤压一车削工艺，可弥补铸造微孔的缺陷，在高速切削中，提高了切削的精度和表面的光洁度。



## → 车削刀系列

### TURNING TOOL SERIES

During the cutting process of rollers and brake discs, due to the high hardness and complex structure of the workpiece itself, it is difficult to cut. The performance and quality of cutting tools directly affect the efficiency, processing accuracy and surface quality of cutting processes. Since the surface structure of the workpiece is hard and brittle, choosing PCBN integrally welded tools during the machining process can increase the service life of the tool.

在轧辊和刹车盘的切削加工过程中，由于工件本身硬度较高，结构较为复杂，因此在加工时有较高的切削难度。而刀具性能和质量的优劣，直接影响切削加工的效率、加工精度和加工表面质量。由于该工件表层组织硬而脆，在加工过程中，选择 PCBN 整体焊接式刀具，可提高刀具使用寿命。



## → HSK、HFS 链接方式系列

### HSK、HFS SERIES TOOL HOLDER

With the continuous development of the machine tool equipment industry and machinery manufacturing industry, PCD tools with HSK and HFS link methods are more widely used.

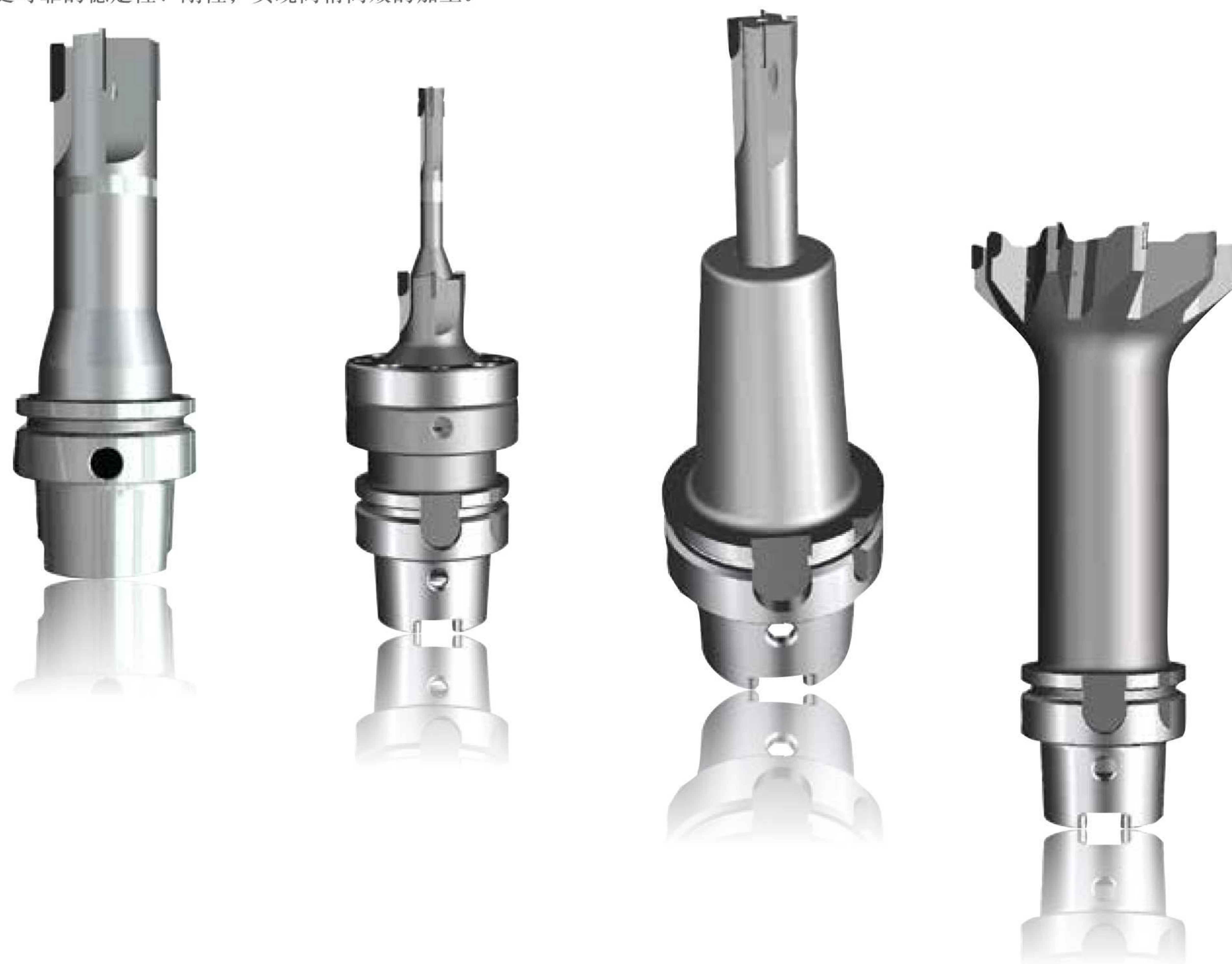
For example: this series of tools are used for processing automobile engine cylinder head valve guides, seat ring bottom holes and guide holes, seat ring cones, gearbox casings and other parts.

During the processing, PCD tools with HSK and HFS linking methods are tightly linked with the machine tool spindle through the taper surface and end surface. Repeated clamping and positioning are accurate, suitable for high-speed cutting, and have more reliable stability and rigidity to achieve high-precision and efficient processing.

随着机床装备业和机械制造业的不断发展，HSK、HFS 链接方式的 PCD 刀具应用更加广泛。

例如：该系列刀具用于汽车发动机缸盖气门导管、座圈底孔及导管孔、座圈锥面、变速箱壳体等部位的加工。

在加工过程中，HSK、HFS 链接方式的 PCD 刀具以锥面和端面与机床主轴拉紧链接，重复装夹定位准确，适用高速切削，有更可靠的稳定性、刚性，实现高精高效的加工。



Different tool holder interfaces can be selected according to the customer's different machine tool rigidities, such as heat-shrinkable, integrated, flange adapter, etc. The tool is factory-set with a dynamic balance level of G2.5 and is equipped with internal cooling holes to increase the service life of the tool.

可根据客户不同的机床刚性选配热缩式、一体式、法兰盘转接式等不同的刀柄接口。刀具出厂预设动平衡等级 G2.5，并带有内冷孔，提高刀具使用寿命。





## → 槽铣刀系列

### GROOVE CUTTER SERIES

The forming slot milling cutter has been successfully used in slot milling. Multiple slots can be formed and milled at one time, which reduces the use of tools and the number of tool changes, greatly improving the processing efficiency.

The water outlet design in the center of the tool can effectively reduce the processing heat in the cutting area, reduce tool wear, and give the tool a longer processing life.

成型槽铣刀成功运用到槽铣中来，多根槽一次成型铣削，减少刀具使用及换刀次数，大大提高了加工效率。刀具中心出水设计，可以有效减少切削区域的加工热量，减少刀具磨损，使刀具拥有更长的加工寿命。

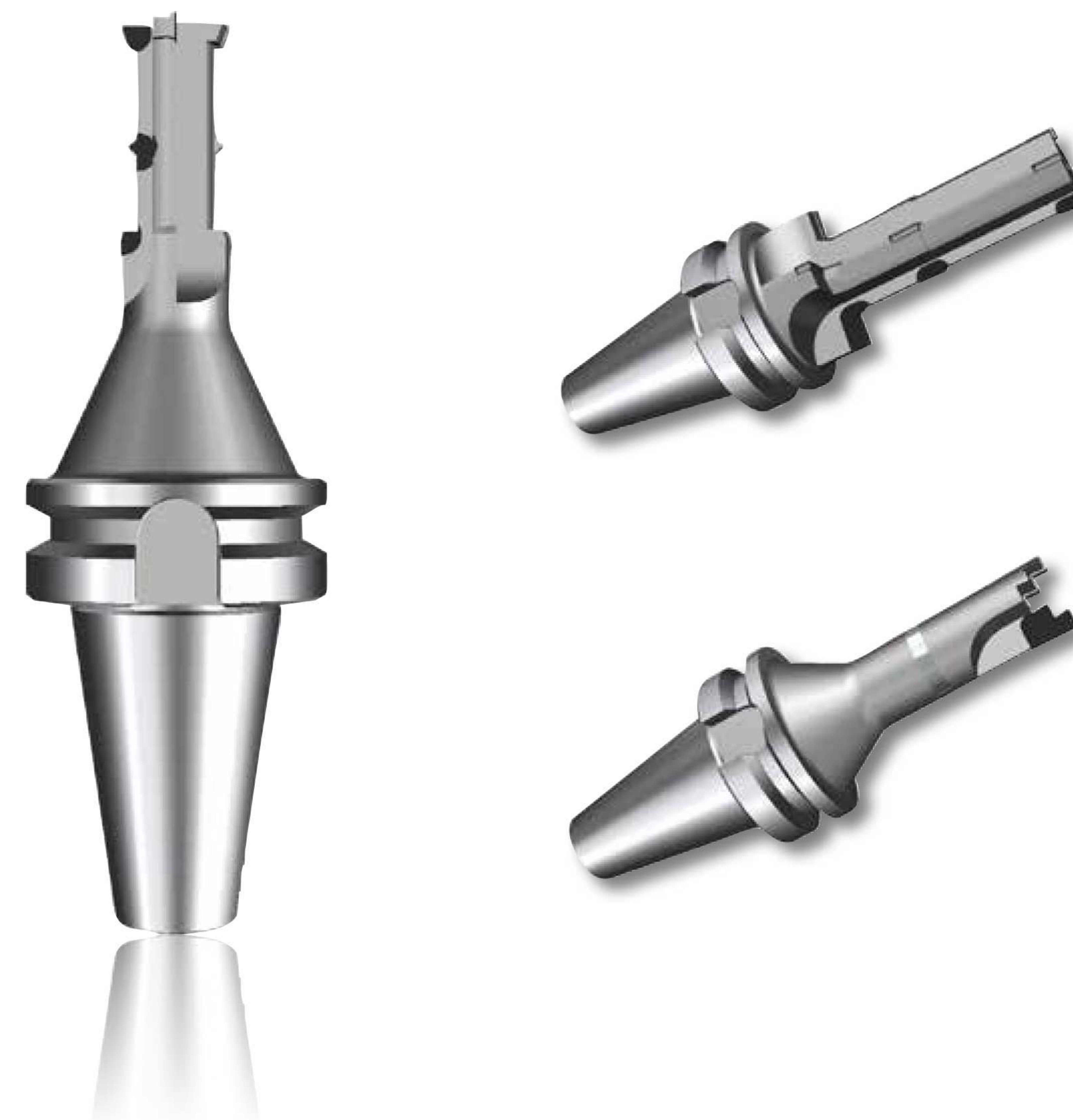


## → BT 刀柄链接系列

### BT SERIES TOOL HOLDER

It integrates rough and finishing machining of the piston pin hole, circlip groove, hole opening/hole bottom chamfering, and completes multiple processes with one tool change, which is more efficient. After the PCD cutting edge is worn, grinding and chip replacement services can be provided.

集粗精加工活塞销孔、卡簧槽、孔口 / 孔底倒角为一体，一次换刀完成多道工序，效率更高，PCD 切刃磨损后可以提供修磨、换片服务。



## → 刀杆刀柄系列

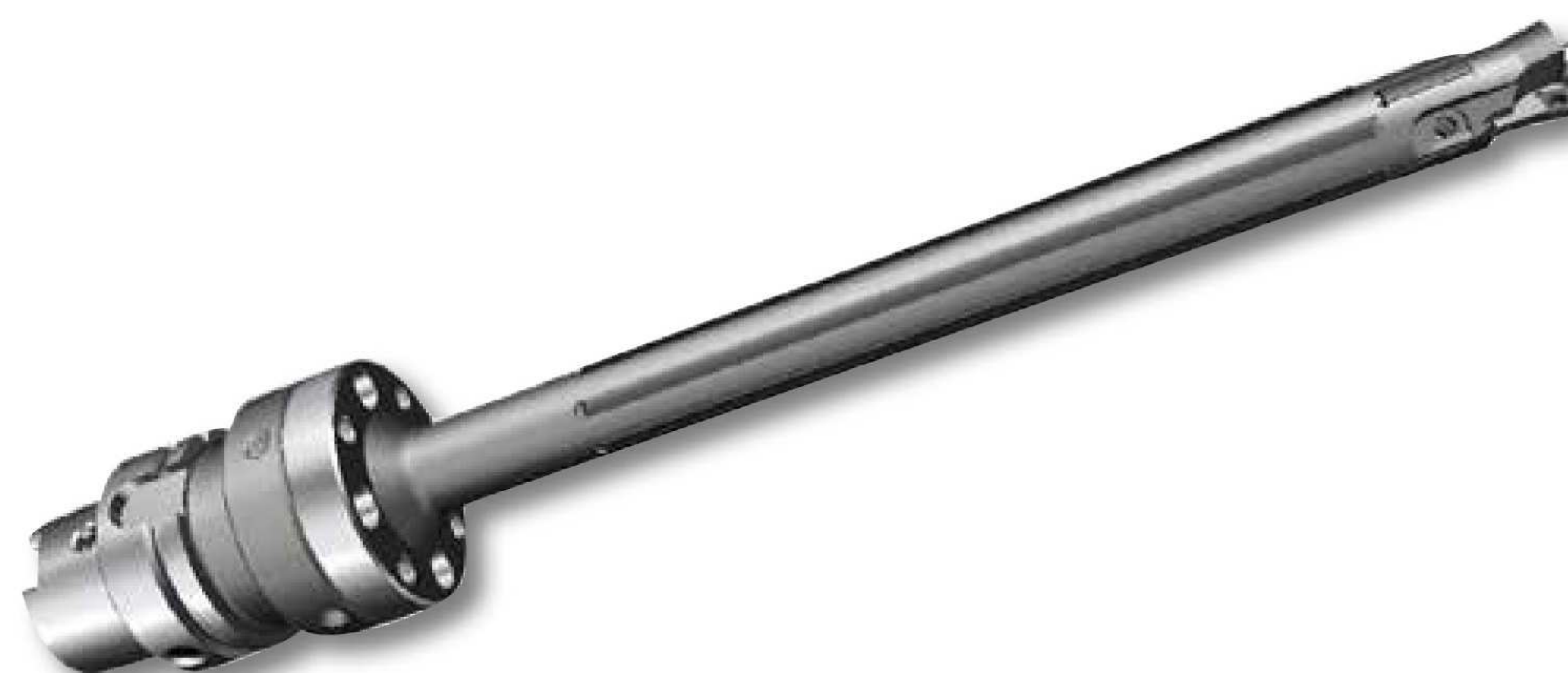
## ARBOR TOOL HOLDER SERIES

While specializing in the production of superhard material (PCD/PCBN) cutting tools and other products, we can also produce non-standard complete sets of composite cutting tools, tool handles, tool holders, non-standard tooling fixtures and other products according to the different uses of various mechanical processing manufacturers.

For rough and fine machining of the camshaft hole, the PCD material in this solution is not only used as the cutting edge, but also as the material of the guide strip. It makes full use of the small friction coefficient of PCD. The high-precision fine-tuning mechanism design can quickly and easily adjust the tool size to the required state. The high-rigidity locking pressure plate provides strong pressing force and higher process safety. Coupled with the special water outlet design, it can not only ensure the tolerance, roundness and coaxiality of the camshaft hole during deep long hole processing, but also obtain Good surface roughness.

在专业生产超硬材料（PCD / PCBN）刀具等产品的同时，可以根据各类机械加工厂家的使用不同，生产制造非标类成套复合刀具、刀柄、刀杆、非标工装夹具等产品。

粗精加工凸轮轴孔，此方案中 PCD 材质不仅作为切削刃，也作为导向条的材质，充分利用 PCD 摩擦系数小的特点，高精度微调机构设计可以快速、简单的调节刀具尺寸到要求状态，高刚性锁紧压板提供强劲的压紧力，更高的工艺安全性，加上特殊的出水孔设计，在深长孔加工中不仅可以保证凸轮轴孔的公差、圆度、同轴度还可以获得良好的表面粗糙度。



## → 面铣刀系列

### FACE MILLING CUTTER SERIES

The main plane of the cylinder is finished using a combination of cutting blades and wiper blades. The cutting blades are designed with negative chamfers to meet the large impact force generated during dual-material processing, prevent the tool from chipping, and maximize the tool's performance, service life. Wiper blades are available in a variety of blade shapes to meet customers' special needs for surface RZ and PT values. Ultra-short delivery time, simple operation methods, and higher economy truly reduce the customer's unit cost!

精加工缸体主平面，采用切削刀片和修光刀片相组合的模式，切削刀片设计有负倒棱以满足双材质加工时所产生的大冲击力，防止刀具崩刃，最大限度的发挥刀具的使用寿命。修光刀片有多种刃型可选，以满足客户对表面 RZ、PT 值的特殊需求。超短的交货期，简单的操作方法，更高的经济性，真正降低了客户的单件成本！



## → 球头铣刀系列

### BALLNOSE END MILLS

The advanced shaping tool sharpening process can not only ensure the strict arc accuracy of the ball milling cutter, but also ensure the consistency of each tool to adapt to the requirements of dual-spindle processing, reduce your machine adjustment time, and ensure reliability. Better tool quality for greater process security! The brisk cutting environment ensures impeccable surface roughness and longer tool life to meet your needs for high efficiency and flexibility!

先进的成型刀具刃磨工艺，不仅可以保证球铣刀严格的圆弧精确，而且可以使每只刀具的一致性得到保证，以适应于双主轴加工使用要求，减少您的调机时间，以可靠的刀具质量实现更高的工艺安全性！轻快的切削加工环境保证无可挑剔的表面粗糙度，更长的刀具寿命满足您对高效率、高灵活性的需求！



## → PCD、PCBN 镗刀

### PCD、PCBN BORING TOOL

Widely used in processing in various machinery industries. Among them, the automobile engine valve seat cone and valve guide hole have very strict requirements on cylindricity and coaxiality. The high-precision processing of PCD/PCBN boring tool series not only ensures the sealing of the valve, but also ensures the performance of the engine, while improving production efficiency.

广泛应用于各机械行业的加工。其中汽车发动机阀座锥面、气门导管孔对其圆柱度、同轴度的要求非常严格，而PCD/PCBN 镗刀系列刀具高精度的加工不仅保证了气门的密封性，更保障了发动机的性能，同时提高了生产效率。





Metal Cutting

## → 复合刀具系列

## PROFILE TOOL SERIES

Using imported ultra-fine particle PCD material and imported high-end equipment, it can sharpen extremely high edge quality. The sharper cutting edge reduces cutting resistance and torque, allowing the tool to have a higher service life when processing aluminum profiles. and surface quality. The cutting process uses 0.15mm ultra-fine zinc-coated wire, which can ensure that the inner contour corners and arcs of the cutting edge are within 0.075mm, thus ensuring the extremely high workpiece contour accuracy.

The ingenious design of the PCD molding composite tool effectively avoids tool vibration caused by insufficient rigidity of the machine tool spindle and tooling fixtures. The processing dimensions are highly integrated and all are completed in one feed, which greatly improves the safety and production efficiency of the process.

采用国外进口超细微粒 PCD 材质及进口高端设备，可以刃磨出极高的刃口质量，更加锋利的切削刀刃降低了切削阻力和扭矩，使刀具在加工铝型材时能够拥有更高的使用寿命和表面质量。切割加工使用 0.15mm 超细的包锌丝，可以保证刃口内轮廓拐角、圆弧 0.075mm 以内，从而能够保证要求极高的工件轮廓精度。

PCD成型复合刀具的巧妙设计，有效的避免了因机床主轴、工装夹具刚性不足所引起的振刀现象。加工尺寸高度集成化，一次进刀全部完成，大大提高了工艺的安全性和生产效率。



→ 复合刀具系列

PROFILE TOOL **SERIES**





Metal Cutting

## → 复合刀具系列

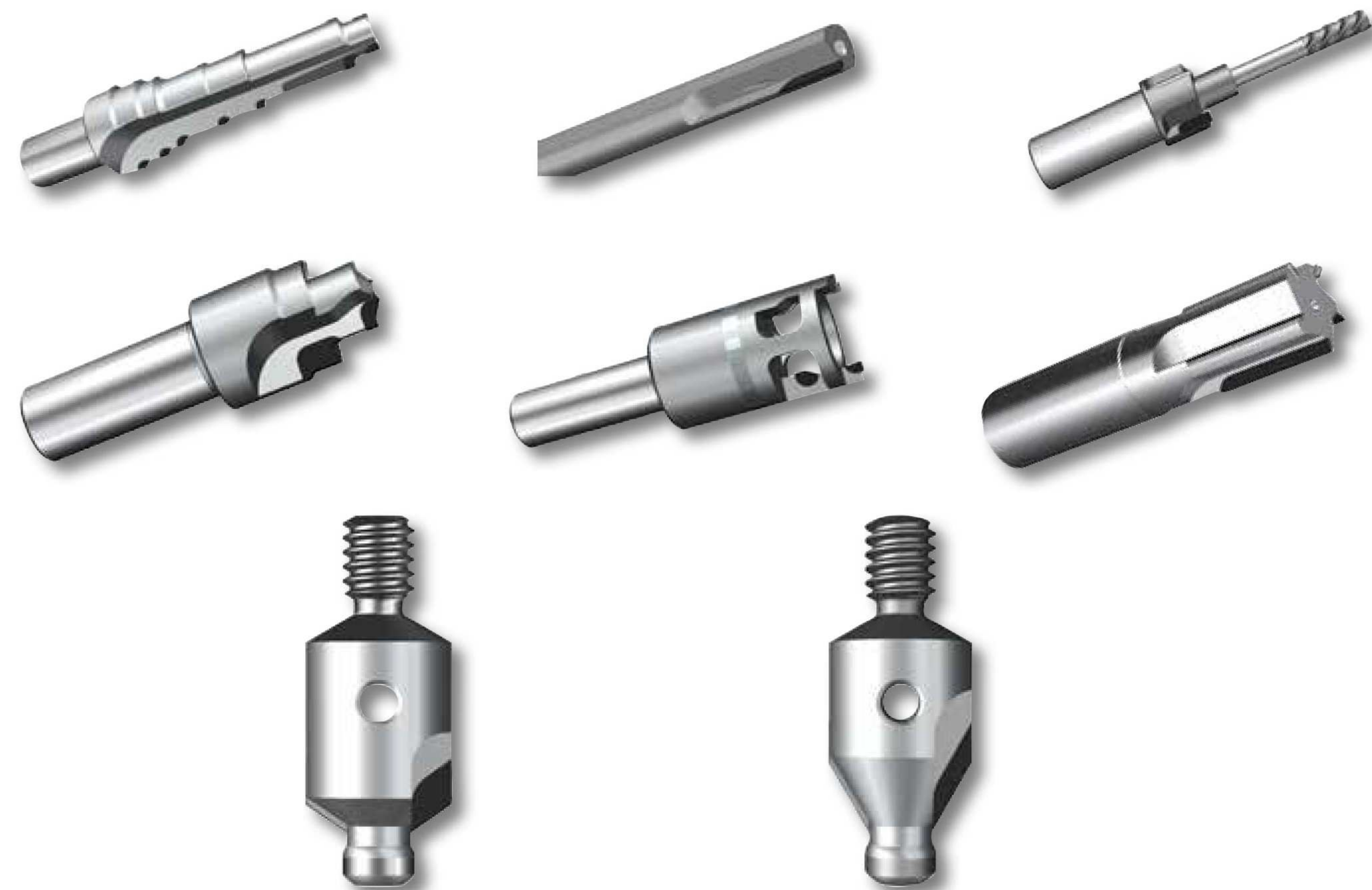
### PROFILE TOOL SERIES

For single through hole and blind hole processing, the reamer is standardized and highly efficient, and the blade is polished, which can bring higher surface roughness Ra0.2 and service life. The cutting speed can reach 200-1000m/min, and it can handle high-speed, high-feed, and high-precision processing with excellent performance.

For deep hole processing, the special water outlet structure design of the tool can effectively prevent the problem of aluminum chips being difficult to break and winding around the cutter body during aluminum profile processing. The guide design of the cutter body can ensure good dimensional accuracy and stability of the cutter at high speed.

针对单一的通孔、盲孔加工，铰刀标准化、高效率，刃部经过抛光处理，可以带来更高的表面粗糙度 Ra0.2 和使用寿命。切削速度可达 200-1000m/min 能够以极佳的性能胜任高转速、高进给、高精度加工。

深孔加工，刀具特殊的出水孔结构设计可以有效预防铝型材加工时铝屑不易折断、缠绕刀体的问题。刀体的导向设计可以保证刀具在高速状态下有良好的尺寸精度和稳定性。

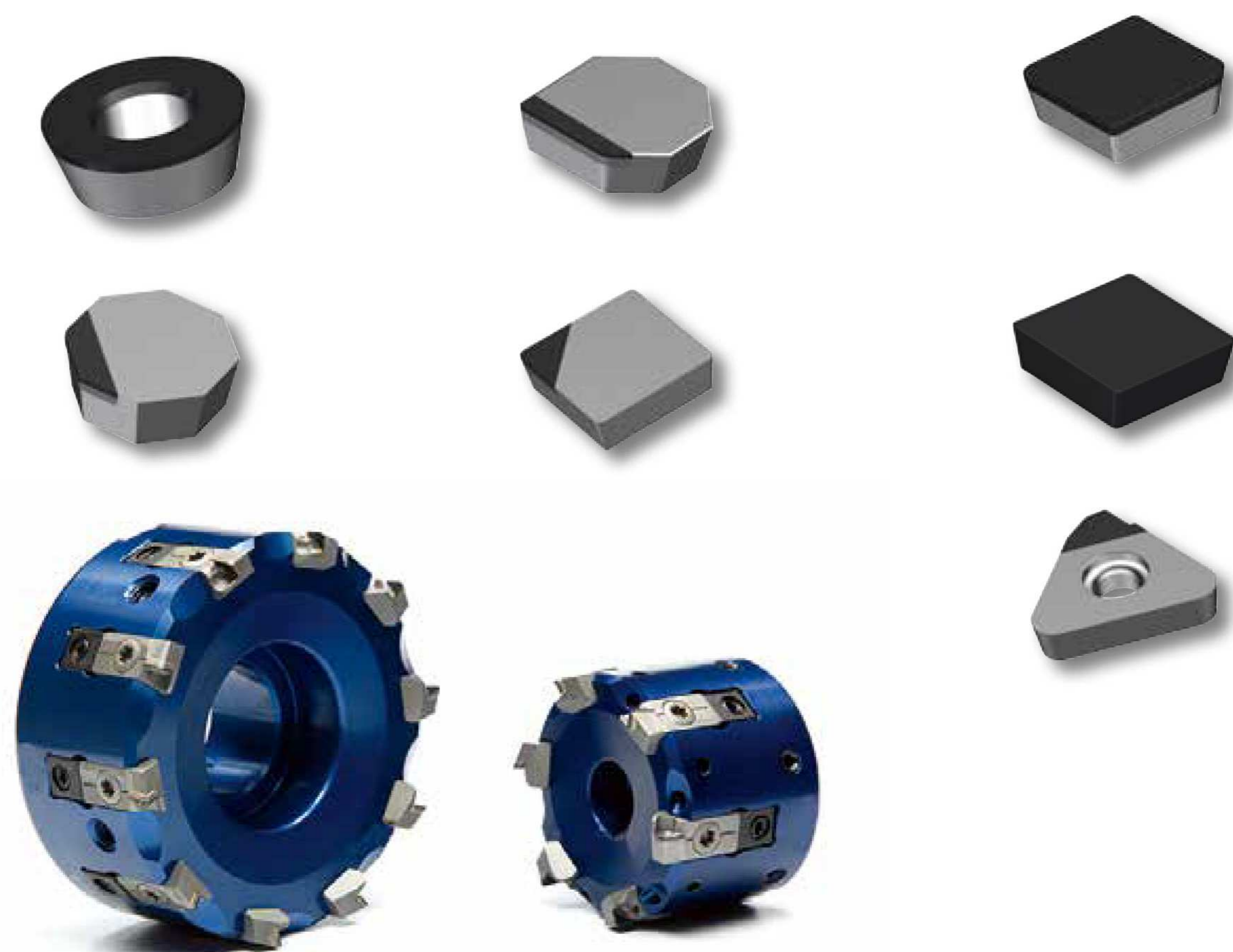


## → PCBN 铣刀片系列

### PCBN MILLING INSERT **SERIES**

It is mainly used for processing cast iron materials. The milling speed can reach 800-1500m/min, which is 5-10 times that of traditional tools. The processing roughness can reach Ra0.2. It has the advantages of high processing efficiency and long service life.

主要用于铸铁类材质的加工，铣削速度可达 800-1500m/min，是传统刀具的 5-10 倍，加工粗糙度可达 Ra0.2，具有加工效率高、寿命长等优点。



## → PCD 铣刀片系列

### PCD MILLING INSERT **SERIES**

It is used for finishing processing of non-ferrous metals and has the characteristics of high wear resistance, impact resistance and no chip sticking. It is suitable for processing in batch production lines and is widely used in the engine industry for processing die-cast aluminum materials. Since PCD milling tools have excellent processing characteristics for aluminum alloy materials, they will be more comprehensively developed and promoted in the processing industry in the future.

用于有色金属的精加工，具有高耐磨、抗冲击、不粘屑等特点。适用于批量生产线的加工，在发动机行业中针对压铸铝材质加工中得到广泛应用。由于 PCD 铣削刀具对铝合金材质具有优良的加工特性，今后也必将在加工行业中得到更全面地发展和推广。





Metal Cutting

→ 服务流程

SERVICE PROCESS

