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SurfMill8.0

CAD/CAM Software Aiming at Precision Machining

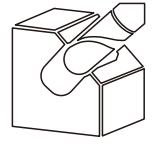


ENTERPRISE CONCEPT

Conscientious in behaviors , dedicated in jobs

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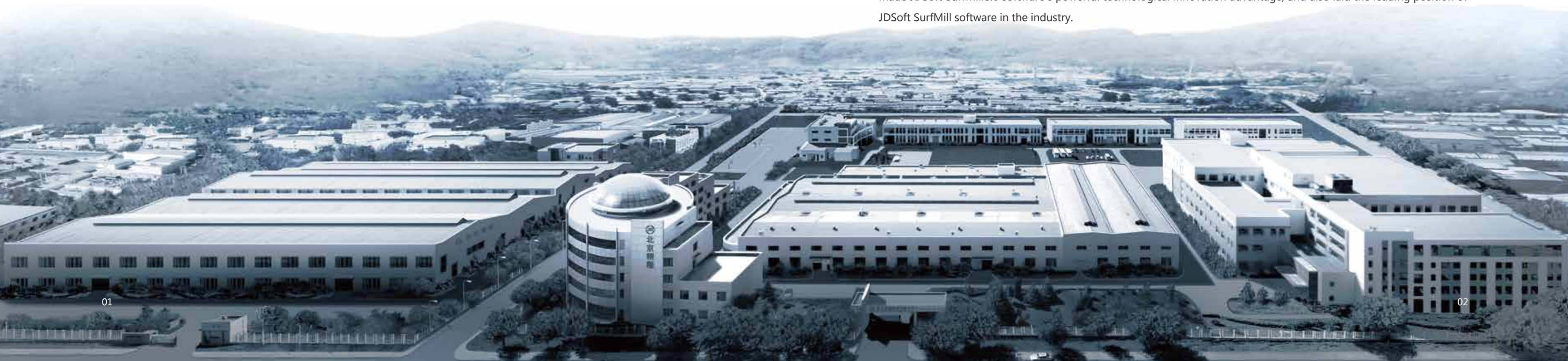
ABOUT US

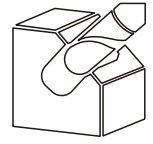
Beijing Jingdiao Group was founded in 1994, one of the national torch plans and key high-tech enterprises, which integrates with scientific research, production, sales and service. The group consists of the parent company Beijing Jingdiao Group co., LTD, 10 wholly-owned subsidiaries including Langfang Jingdiao CNC Machine Manufacturing co., LTD., Beijing Jingdiao Precision Machinery Manufacturing co., LTD., Xi'an Jingdiao Software Technology co., LTD., and more than 40 branches. For more than 20 years, Beijing Jingdiao has devoted to the research and production of CNC machine tool, CNC system, CAD/CAM software, high-speed spindle, high-accuracy rotary part and some other related fields. The group has more than 4,900 employees and 15,000 plus customer, annual output value is more than 4.0 billion.

Xi'an Jingdiao Software Technology Corporation is one of the subsidiaries of Beijing Jingdiao. It is a high-tech company which researches, develops and sells industrial software and automation integrated solutions. Through continuous extension of product line, the company provides comprehensive solution according to customers' needs and devotes to R&D of CAD/CAM software, information system and automated system.

We have a team of professionals who specialize in software R&D, software application and verification, and insist on investing a large amount of money each year for the continuous R&D of products. The long-term strategic decision made JDSOFT SurfMill 8.0 software's powerful technological innovation advantage, and also laid the leading position of JDSOFT SurfMill software in the industry.

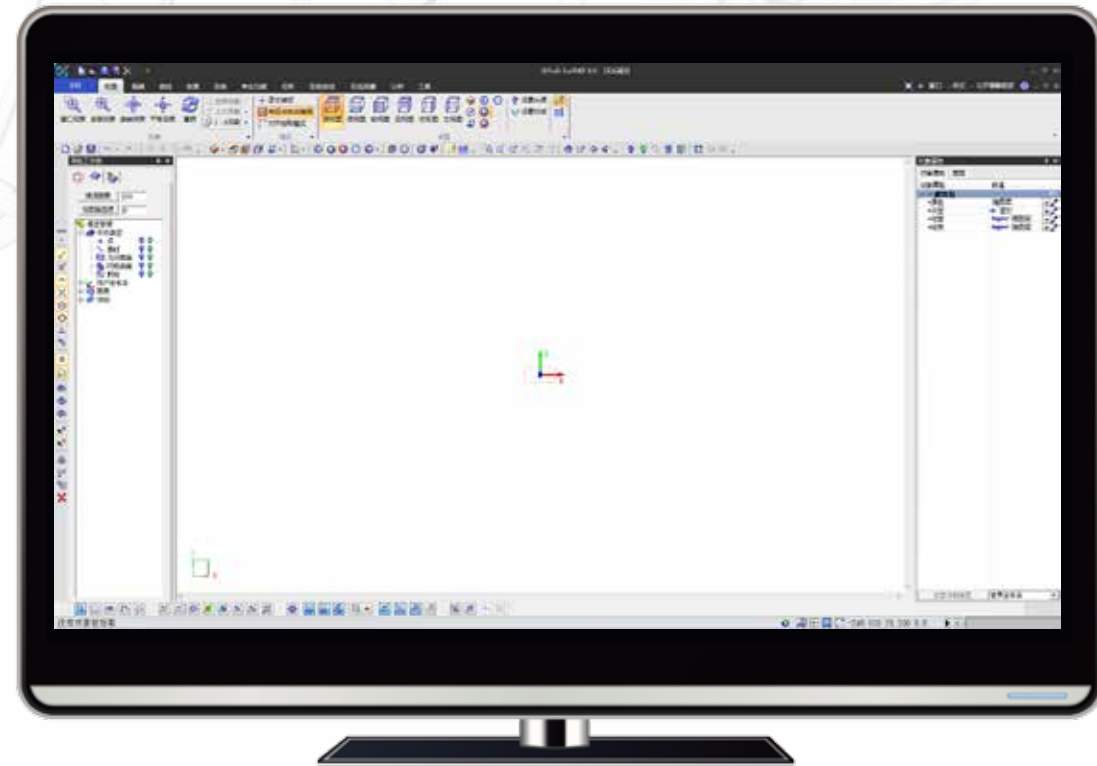
Going forward with our clients hand in hand by leading the science and technology.



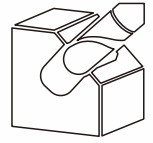


SOFTWARE OVERVIEW

JDSOFT SurfMill is core software product of Beijing Jingdiao Group. It is known as the leader of domestic CAD/CAM software in precision machining field. The new version of software breaks through a number of technical problems including surface relief and same-amount cutting, which increases Jingdiao machining center's processing ability and adaptability in different processing areas. Through combining characteristics and development trends of multiple industries, JDSOFT SurfMill 8.0 provides comprehensive advanced functions and programming scheme for precision machining field. It extends the processing scope of CNC system, improves the processing quality and efficiency and provides protection for safety and stability of product processing.



The simple user interface brings you a better operating experience. You can add or delete menu commands according to personal preferences and industry characteristics.

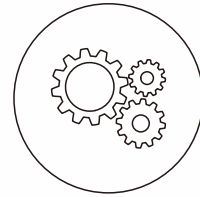


SOFTWARE ADVANTAGES



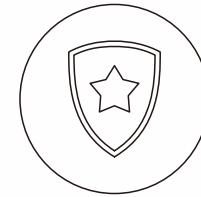
Easy Operation

Intuitive and friendly GUI is in line with Windows system and operating practices of popular CAD/CAM software. Both beginners and experienced users can get started rapidly.



Comprehensive Functions

Perfect surface modeling and editing functions can meet the design needs of mold & die, gear, jewelry and auxiliary surface with high efficiency. It supports 2-axis to 5-axis machining, path analysis and path simulation. It has obvious advantages in precision machining field and 5-axis machining field.



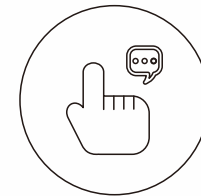
Safe Paths

JDSOFT SurfMill 8.0 has advanced algorithm. While calculating path, it is able to do overcut detection, report detailed overcut amount and the overcut path. Through detecting interference, interference path and overcut path can be automatically deleted to ensure path security.



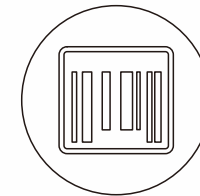
Open NC

JDSOFT SurfMill 8.0 provides post-processing customizing platform. Machining path generated in the software can be converted into machining path documents of different NC systems which makes the software can be widely used on different machining platform.



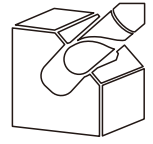
Customize for Industry

Customized professional and efficient programming solutions can be provided according to years of processing experiences and processing characteristics of various industries.



Independent Rights

JDSOFT SurfMill 8.0 is independently researched and developed by Beijing Jingdiao. It doesn't involve infringement. Users can use genuine software.



SOFTWARE FEATURES

Abundant software features and sophisticated processing strategies of JDSoft SurfMill8.0 allow you to perform path programming flexibly and efficiently. Optimized programming options and a variety of special features allow you to experience the shortest programming time, high quality processing, and efficient production.

Software Features:

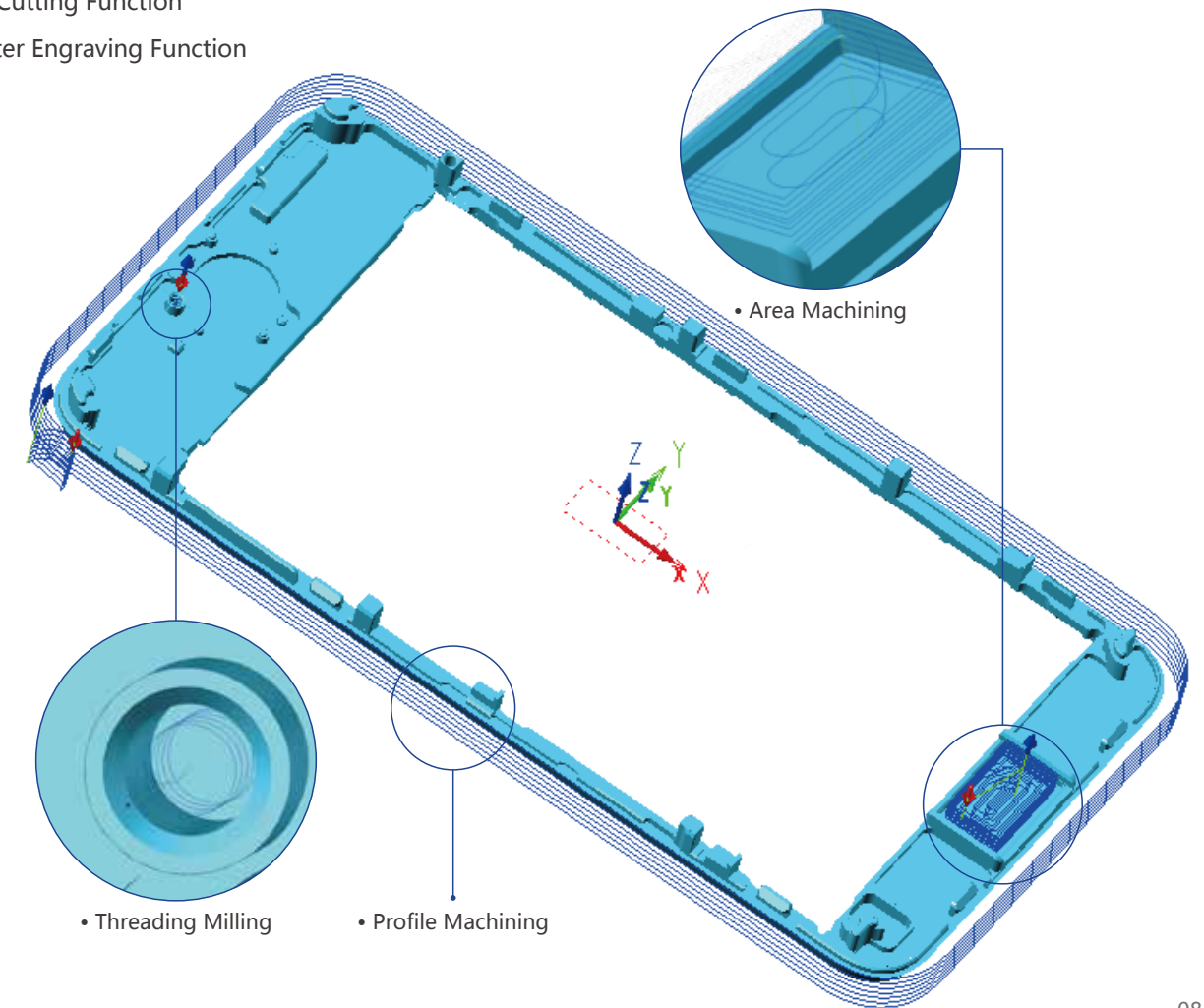
- ① Product design, mold & die design
- ② 2-5 axis processing module
- ③ Curve and surface design
- ④ Special features



2D Processing

JDSoft SurfMill 8.0 provides many kinds of 2.5-axis processing methods based on point, single line and closed area. These methods are easy to program, useful and have complete details. Functions include profile cutting, 3D clean-up, thread milling and same-amount cutting are widely used in many processing areas including regular parts machining, glass panel grinding and character engraving.

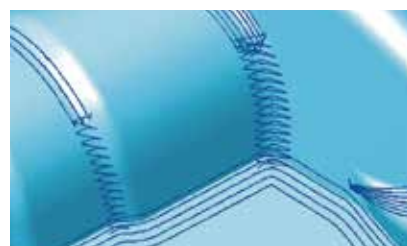
- Area Machining Solution
- Profile Cutting Function
- Character Engraving Function



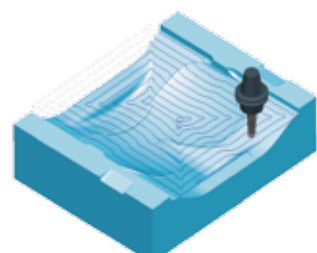
3-axis Surface Machining

JDSOFT SurfMill 8.0 provides comprehensive machining process methods, such as roughing, re-roughing, finishing and cleanup. Different machining solutions can be chosen in each process according to surface features. The generated safe and high-quality machining paths can meet the needs of machining industries, such as high-precision mold & die and industrial products. New functions such as Path Point Redistribution and Micro-milling have greatly improved the surface quality of three-axis precision machining.

- Surface Follow Layer Roughing
- Surface Re-roughing
- Surface Finishing
- Surface Cleanup
- Relief Model Machining
- Hybrid Cleanup



• Hybrid Cleanup

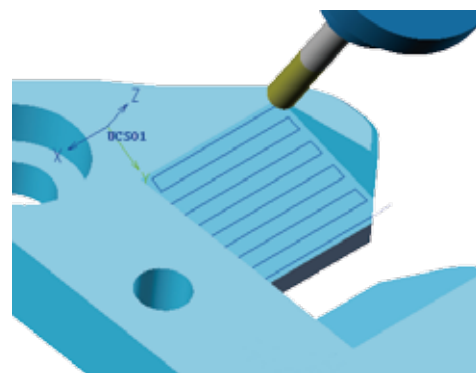


• Surface Follow Layer Roughing

Multi-axis Locating Machining

Multi-axis locating machining is the main way of multi-axis machining. About 70% of multi-axis parts are machined through locating machining method. JDSOFT SurfMill 8.0 provides perfect locating machining method. The programming process and path output method are easy to learn, which can effectively reduce programmers' using difficulty and improve programming efficiency. It is widely used in polyhedron electrode industry, 3C shell parts industry, industrial model industry and some other industries.

- Multi-axis Locating Machining

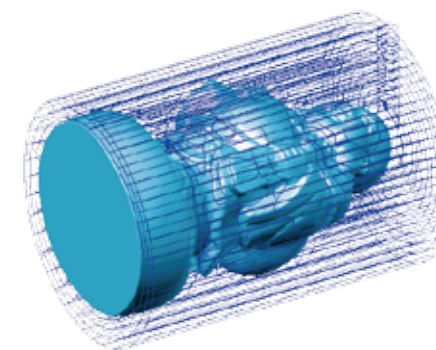


• Multi-axis Locating Machining

4-axis Rotary Machining

4-axis rotary machining method provided by JDSOFT SurfMill 8.0 supports roughing, finishing, and cleanup. It's mainly used in roughing and finishing programming for rotary parts. It solves 4-axis programming problems for 4-axis rotary parts and recessed cavity parts. It has high path generating efficiency and is widely used in industries such as cylindrical crafts and recessed cavity mold of bottle shape.

- 4-axis Rotary Rough Machining

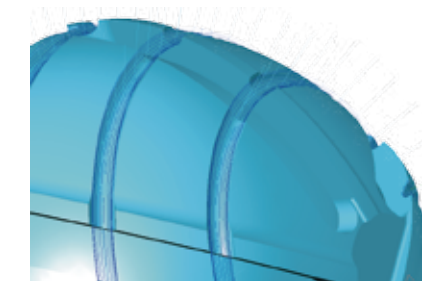


• 4-axis Rotary Rough Machining

5-axis Machining

The software provides various multi-axis programming tactics and cutter axis control methods, which is convenient for users to choose according to the characteristics of machined parts and generate multi-axis synchronous paths rapidly. It meets the multi-axis programming needs in many areas such as 3D model multi-axis machining, multi-axis character engraving, multi-axis carving and multi-axis chamfering. The software can generate safe and reliable paths in fast calculating speed.

- 5-axis Surface Projection Machining
- Multi-axis Engraving and Carving
- 5-axis Flank Milling
- Multi-axis Drilling and Thread Milling
- Convert 3-axis Machining Paths to 5-axis Machining Paths
- Various Ways to Define Cutter Axis

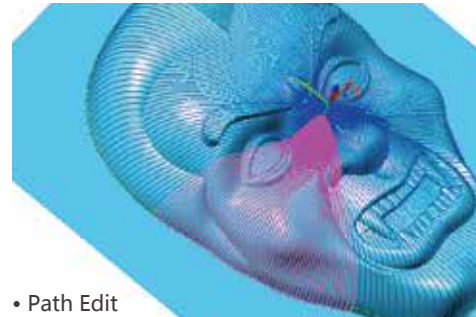


• Acetabular processing

Toolpath Edit and Management

The software has various toolpath edit functions and is convenient for users to adjust and modify the paths according to their needs. It provides professional path templates which can reduce programming difficulties and improve programming efficiency. Macro Template function can facilitate customers to call and modify the macro program, reducing unnecessary operations. The program sheet can be customized, which makes it suitable for customers in different processing industries and conducive to enterprise standardization work. NC instruction can be inserted quickly which can meet customers' process management needs. The unique hinting and error correction functions of JDNCedit make it easy for users to learn, edit, and adjust structure of NC codes.

- Customized Path Template and Process Sheet
- Path Edit

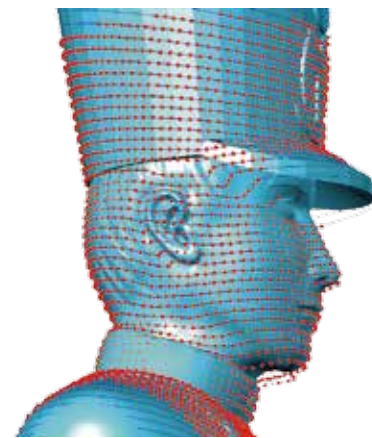


• Path Edit

Path Security Inspection, Analysis and Simulation

The software provides path security inspection and analysis functions. Many problems such as workpiece overcut scrapping, machine collision caused by inappropriate path parameter and process planning can be avoided. The processing security of machine can be guaranteed through overcut inspection, tool collision inspection, cutting load analysis, wireframe simulation, machining simulation, machine simulation and some other methods.

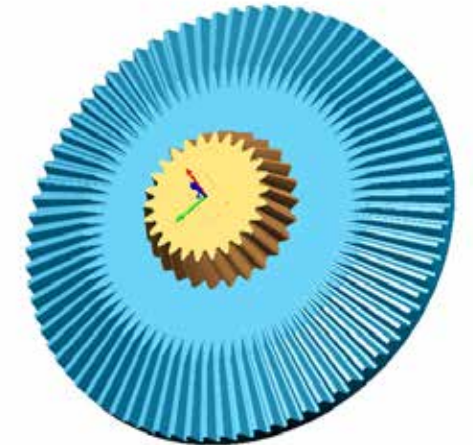
- Overcut Inspection
- Tool Collision Inspection
- Cutting Load Analysis



• Tool Collision Inspection

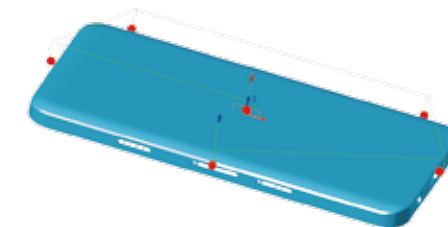
Surface Modeling and Model Repairing

The software provides comprehensive generating and editing functions for curves and surfaces. It can not only easily generate auxiliary lines and surfaces needed by programming and make surface repairing convenient, but also meet the needs of converting 2D drawing to 3D model for designing mold & die, gear and jewelry. It supports a variety of input format including STEP, X_T, IGES and STL and can receive data formats of different software.

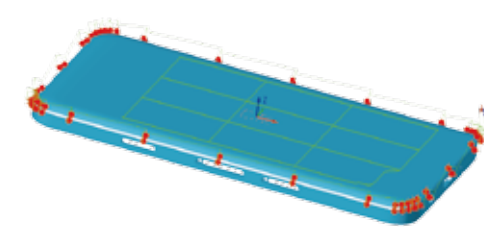


On-line Inspection and Smart Modification Technology Application

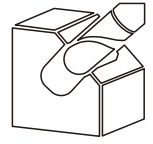
SurfMill8.0 provides the professional on-line inspection and smart modification technology module, which can realize quick customization of inspection position, inspection parameters and inspection data processing. The software supports inspecting process simulation, collision and interference check to generate safe and efficient measurement solutions. Combined with Jingdiao CNC system and precision machining technology of Jingdiao machining center, smart modification and the unification of manufacturing and inspection can be realized.



• Update Center Angle



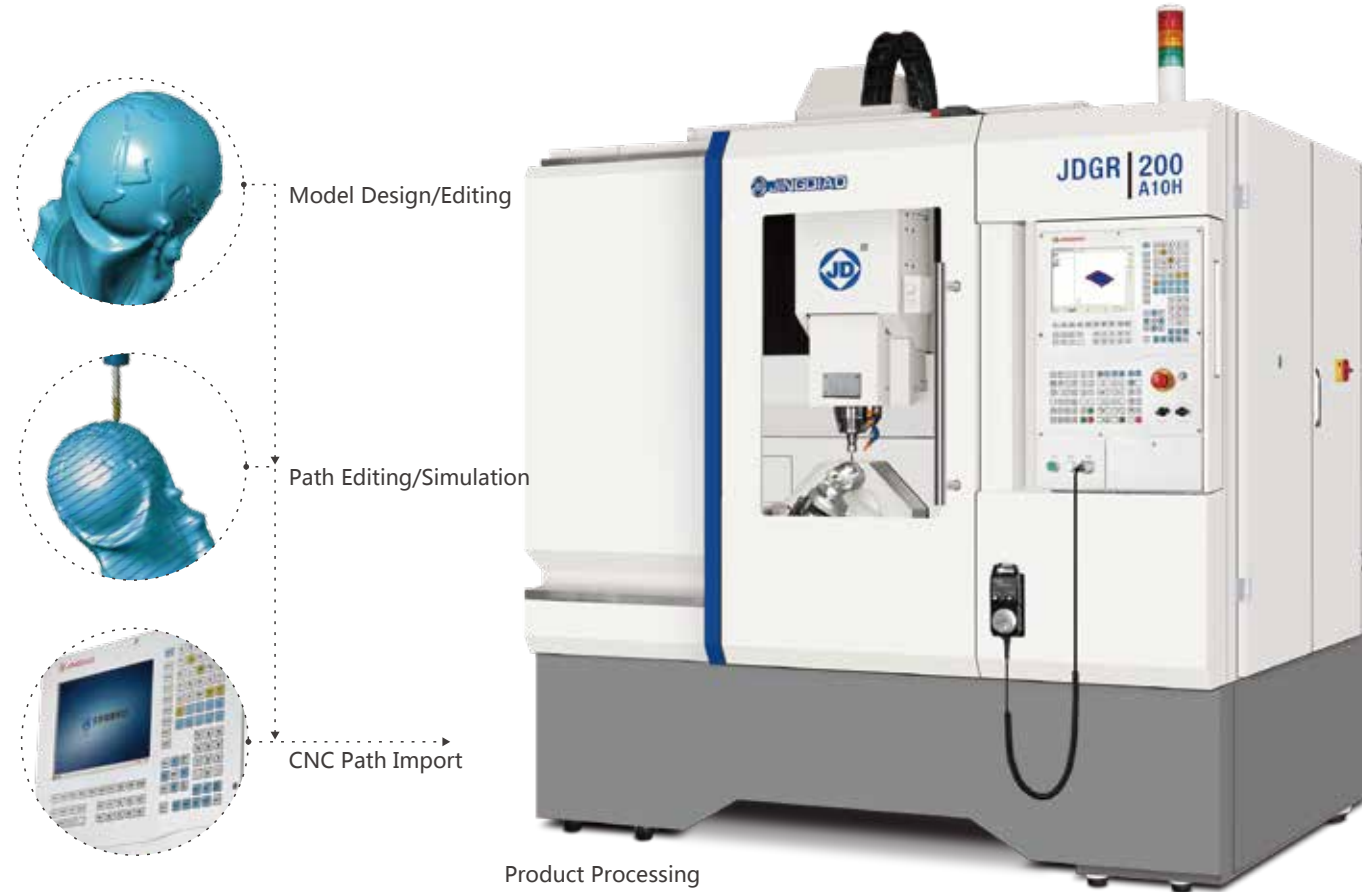
• Update Outline



INDUSTRY SOLUTIONS

With the launch of JDSOFT SurfMill8.0, JDSOFT SurfMill has been upgraded from a design and processing software to an integrated processing platform for CNC processing, which can be perfectly integrated with the JD50 CNC system and the CNC machine tool. At the same time, according to the actual needs of customers, Beijing Jingdiao provides process verification of product processing solutions, as well as overall solutions including fixture design, processing technology, automatic loading and unloading, and product trial production.

Integrated processing platform for CNC processing



Industry Solutions of 3C Small Hardware

With the rapid development of information technology, the technology advantage of 3C industry has become increasingly precise. The parts of 3C product are becoming increasingly sophisticated. How to further improve the processing quality and efficiency of products is a new challenge for enterprises. With many years' processing experience in 3C industry, Beijing Jingdiao Group provides complete and reliable solutions on the processing difficulty of 3C product and helps enterprises establish leading edge.

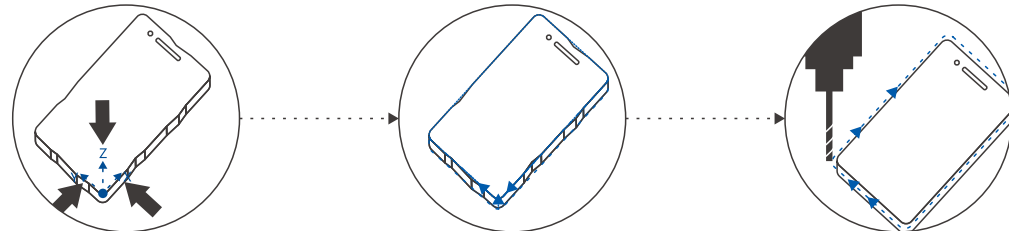


Advantages

Professional Chamfering Function

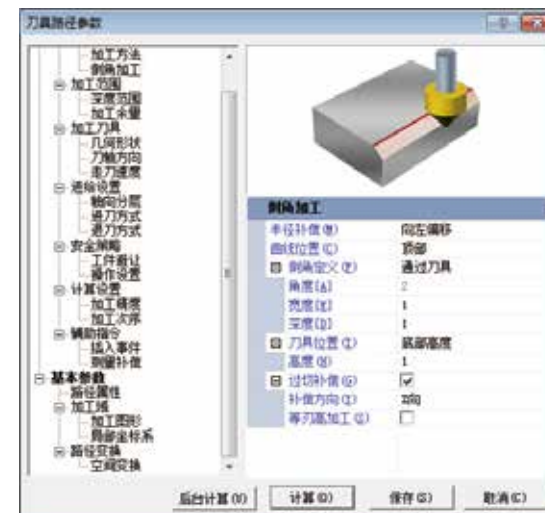
JDSOFT SurfMill 8.0 has professional chamfering function. It can automatically generate processing path according to the tool shape and the curve curvature programming law. Used with the patent, " On-line Inspection and Smart Modification Technology" , owned by Beijing Jingdiao Group, JDSOFT SurfMill 8.0 can control the error range of chamfering width within $\pm 0.03\text{mm}$ and guarantee chamfering width uniformity effectively.

Application of On-line Inspection and Smart Modification Technology :



- Measure the deformation caused by processing and clamping
- Refactor workpiece's profile
- Correct or adjust processing path

Overcut may happen when using traditional machining method to chamfer part with large slope changes. Using the professional chamfering function of JDSOFT SurfMill 8.0 to generate chamfering path can guarantee the uniform processing effect.

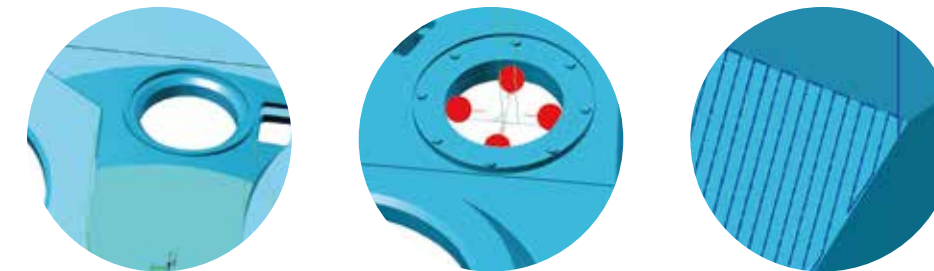


- Professional chamfering path

Efficient Path Generating Method

Workpiece model edit, characteristic extraction and measurement are supported. Measuring and processing paths can be automatically generated if users follow the toolpath wizard. After that the toolpath will be transferred into CNC system and the CNC machine tool complete production with one key. All these measures can effectively improve the path edit efficiency for users. The stable, reasonable and high-efficient way to generate the cleanup path greatly reduces the burden on programmers.

Application of On-line Inspection and Smart Modification Technology :



- Abstract Geometric Elements
- Generate Measuring Path
- Generate Processing Path

Customized Forming Tools Function

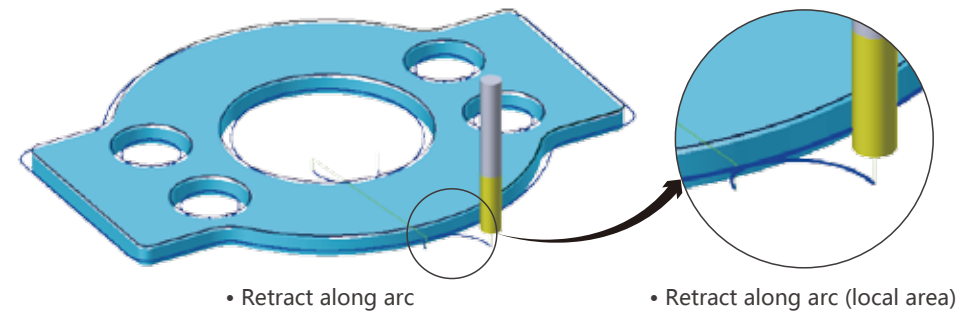
The CAM module of JDSOFT SurfMill 8.0 provides many forming tools, such as "lollipop cutter" , slot cutter. It also allows users to customize tools. Users can select cutting tool according to the shape of the products to be processed conveniently and the generated paths are safe and reliable. All these guarantee the high-efficiency and high profile tolerance for 3C product processing.



- System Tool Library

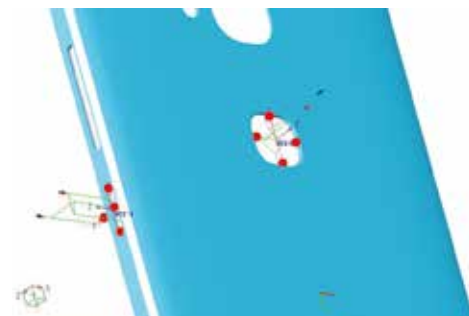
Perfect Feeding/Relieving Cutter Solution

The program can take various measures to alleviate tool marks caused by feeding/relieving cutter, such as generating optimized toolpath, repeating processing path and feeding/relieving cutter along arc automatically. The position of feeding/relieving cutter can be set conveniently through specifying a point to meet the requirements of panel cutting, glass grinding and other processing.



Multi-axis Machining Technology

Shells of 3C electronic products have various types of holes & slots which can only be machined through multi-clamping with traditional machining method. The support for multiple coordinate systems of JDSOFT SurfMill 8.0 makes multi-clamping and multi-axis machining possible when it is used with Jingdiao machining center. Thus, the quality and efficiency of part machining will be improved. The programming difficulty and labor costs will be reduced.



• Support Multiple Coordinate Systems



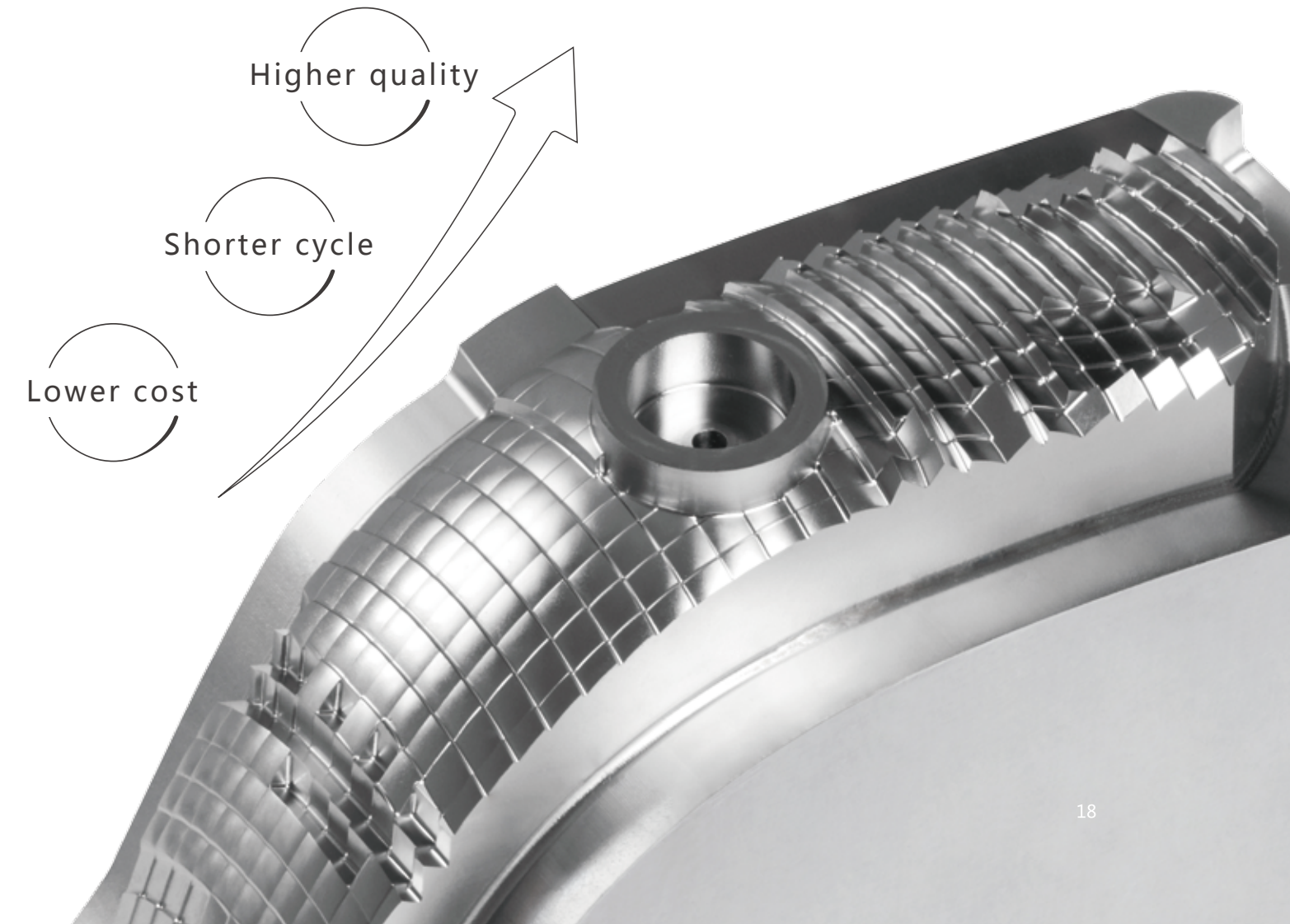
• CNC1



• CNC2

Industry Solutions of Precision Mold&Die and Electrode

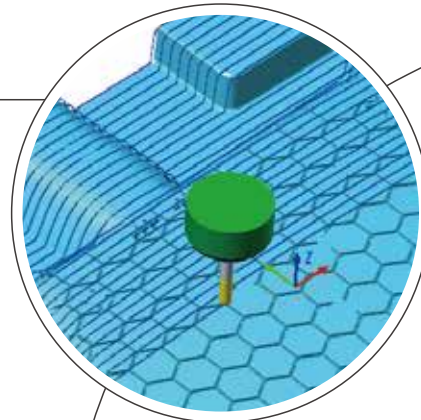
Through the accumulation of a large number of practical experiences and the integration of superior resources, Beijing Jingdiao Group provides integrative solutions for precision mold & die and electrodes industry. The solutions meet the market demand for CNC machining technology of various mold production enterprises, make the mold and electrode production more professional and efficient and shorten the mold manufacturing cycle effectively.



Advantages

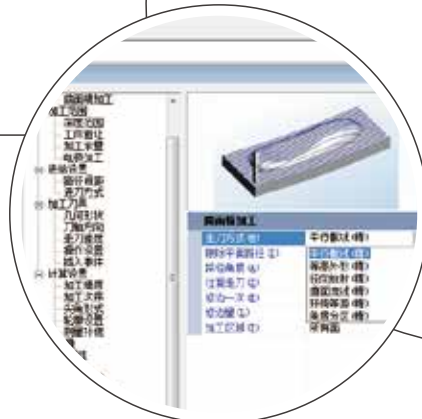
■ Efficient Programming Strategy

JDSOFT SurfMill 8.0 provides a complete set of programming strategies including model input, model repair, programming and simulation. With multi-thread calculation function, it can effectively improve programming efficiency. Meanwhile, it provides a variety of characteristic functions for precision machining to effectively guarantee the high-speed and stable precision machining and enormously improve path programming efficiency.



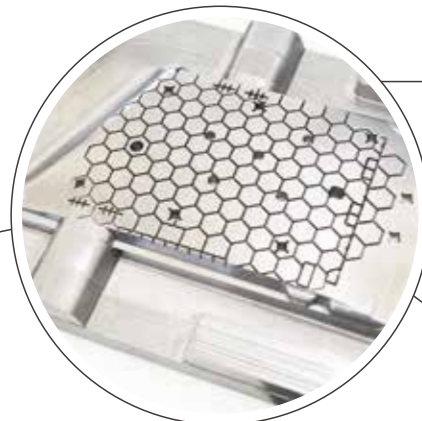
■ A Variety of Finish Machining Strategies

JDSOFT SurfMill 8.0 can adopt many kinds of finish machining strategies according to models with different features. The new functions such as Micro-milling and Path Point Redistribution can significantly improve the surface effect. Meanwhile, it owns many kinds of interpolating methods and feeding/relieving cutter ways for finish machining. All these lead to precise control of processing details and effectively guarantee the surface quality of finish machining.



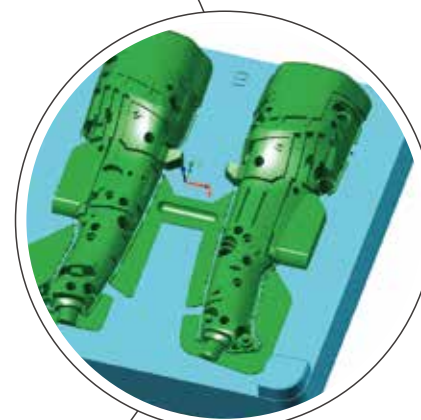
■ Powerful Processing Ability

JDSOFT SurfMill 8.0 can be seamlessly integrated with Jingdiao machining center to ensure the product processing effect. Jingdiao machining center uses advanced control technology which can achieve high-accuracy and high-stability performance, get a higher standard of each process and improve the machining accuracy.



■ High Production Controllability

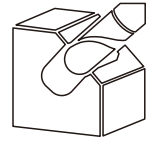
During process planning, each cutting parameter is optimized through a lot of experiments and the machining allowance for each link is strictly controlled, to ensure that the machining process is optimized and the negative effect on production due to processors' different programming level is reduced.



■ Strong Project Management Capability

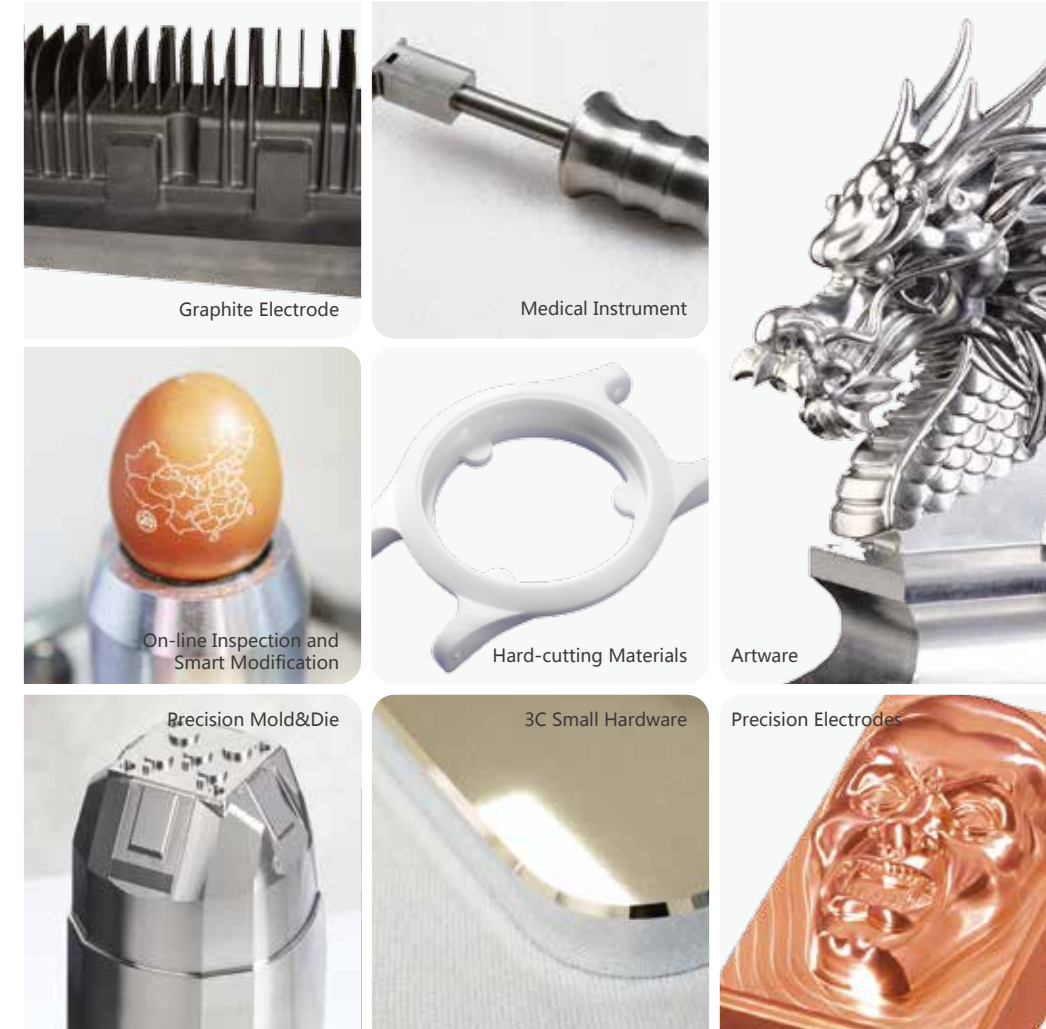
JD50 CNC System, independently developed by Beijing Jingdiao, has perfect handwheel trial cutting, powerful cutting tool management, privilege management and some other functions. These functions reduce the probability of manual errors in mold & die machining process and improve the level of automation and security of the process.

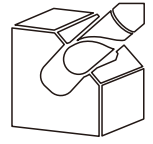




APPLICATION AREAS

At present, Beijing Jingdiao Company's products are widely used in more than 20 industries such as mold & die, electronics, medical equipment, glass panels, hardware, watches, glasses, jewelry, wood carvings, handicrafts, etc., mainly for precision mold processing and batch processing of precision products.





Free Pro Edition

Free professional edition of software is available for customers, which can be downloaded at <http://bbs.jingdiaosoft.com>.



Effective Engineering Service

There are more than 50 branches across the country. Our technical support team can provide fast response to all kinds of technical problems from customers and solve processing problems in production.



Comprehensive Software Training

A set of choices for technical training is available according to customers' time and demands. For example, training on site and training at our branches.



Software Version Upgrade

Continuous upgrade for software brings a better operating experience and provides more effective and stronger technical support for product development.



Remote Technical Support

During your use of software, you can get support by instant message tools, such as phone, E-mail and QQ when you encounter problems. You can also search solutions on our forum.