



THE LINE OF HYPERPRESSURE WATERJET PRODUCTS

DARDI—YOUR GLOBAL WATERJET SOLUTIONS PROVIDER

南京大地水刀股份有限公司
DARDI INTERNATIONAL CORPORATION



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company profile

中国超高压应用技术的引领者，世界一流的水刀制造商

The leader of ultra-high pressure waterjet applications in china,
the top manufacturer of waterjet products in the world.



Dardi International Corporation, taking a leading position in China with global influence, is a high-tech enterprise specializing in R&D, manufacturing, sales and technical service of Ultra-high pressure waterjet technology application products. Its main product, namely “ultra-high pressure numerical control universal waterjet cutting machine”, is the latest cold-cutting technology and advanced manufacturing equipment in the world. It is a kind of world-level high-tech products with application of various technologies such as electromechanical integration, ultra-high pressure waterjet, CNC automation, automatic inspection and compensation, CAD, manufacturing and robots etc.

With its rapid development in technology and increasing demand for cold cutting process by more and more industries, Dardi has become a world famous brand based on its excellent price-performance ratio. Dardi, with experiences in R&D and manufacture with over 2000 users for years, now owns over 40 patents related to ultra-high pressure numerical control waterjet cutting machine and ultra-high pressure water cleaning technology. It takes the lead in compiling of the first Industrial Standard and National Standard for Ultra-high Pressure Waterjet Cutting machine in China.



Economical Cantilever Style DWJ1525-FC



Economical Gantry Style DWJ3020-BC



Model	DWJ1313-FC	DWJ1525-FC	DWJ3020-BC
Construction style	Flying-arm	Flying-arm	Bridge
working size	1300X1300mm	1500X2500mm	1600X2500mm
cutting head travers	150mm	150mm	150mm
max running speed	20m/min	10m/min	20m/min
machine size	3.0X2.8X2.2m	3.5X4.2X2.2m	4.6X2.4X2.0m
CNC controller	PC/CNC	PC/CNC	PC/CNC
fast running speed	0-10m/min	0-10m/min	0-10m/min
repeat position	±0.05mm	±0.05mm	±0.05mm
cutting accuracy	±0.15mm	±0.15mm	±0.15mm
max loading	1000kg/m ²	1000kg/m ²	1000kg/m ²
electric drive style	AC SERVO	AC SERVO	AC SERVO
mechanical drive style	Ball screw and linear guider	Ball screw and linear guider	Ball screw and linear guider

Standard Cantilever Style
DWJ2040-FB



Standard Gantry Style
DWJ3020-BB



Model	DWJ1313-FB	DWJ2040-FB	DWJ3020-BB	DWJ3140-BB
Construction style	Flying-arm	Flying-arm	Bridge	Bridge
working size	1300X1300mm	2000X4000mm	3000X2000mm	3100X4000mm
cutting head travers	150mm	150mm	150mm	150mm
max running speed	20m/min	10m/min	20m/min	20m/min
machine size	3.0X2.8X2.2m	4.2X5.8X2.2m	4.6X3.2X2.2m	—X—X—m
CNC controller	PC/CNC	PC/CNC	PC/CNC	PC/CNC
fast running speed	0-10m/min	0-10m/min	0-10m/min	0-10m/min
repeat position	±0.05mm	±0.05mm	±0.05mm	±0.05mm
cutting accuracy	±0.15mm	±0.15mm	±0.15mm	±0.15mm
max loading	1000kg/m ²	1000kg/m ²	1000kg/m ²	1000kg/m ²
electric drive style	AC SERVO	AC SERVO	AC SERVO	AC SERVO
mechanical drive style	Ball screw and linear guider	Ball screw and linear guider	Ball screw and linear guider	Ball screw and linear guider

Modular Cantilever Style DWJ2060-FB



Modular Gantry Style DWJ46126-BB



Model	DWJ2060-FB	DWJ3040-BB	DWJ3060-BB	DWJ46126-BB
Construction style	Flying-arm	Bridge	Bridge	Bridge
working size	2000X6000mm	3000X4000mm	1500X2500mm	1600X2500mm
cutting head travers	150mm	---mm	---mm	150mm
max running speed	20m/min	--m/min	--m/min	20m/min
machine size	4.3X7.7X2.2m	--X--X--m	--X--X--m	7.6X14.0X2.7m
CNC controller	PC/CNC	PC/CNC	PC/CNC	PC/CNC
fast running speed	0-20m/min	0-20m/min	0-20m/min	0-20m/min
repeat position	±0.05mm	±0.05mm	±0.05mm	±0.05mm
cutting accuracy	±0.15mm	±0.15mm	±0.15mm	±0.15mm
max loading	1000kg/m ²	1000kg/m ²	1000kg/m ²	1000kg/m ²
electric drive style	AC SERVO	AC SERVO	AC SERVO	AC SERVO
mechanical drive style	Ball screw and linear guider	Ball screw and linear guider	Ball screw and linear guider	Ball screw and linear guider

BASIC Series C30B

Basic system is the combination of DARDI's fifteen years experience. This meticulously manufactured universal series products are especially for deep processing of brittleness material with the advantages of steady performance and low cost.



THESEUS Series C40T

Theseus system adopts the intensifier with the major parts made in America, with high performance, low price and long continuous working time. It can nearly cut any kind of materials, metal materials and nonmetallic materials.



VESTA Series C50V

The plunger pump and HP parts of Vesta Series System are all made in USA. Hydraulic Servo System used the constant pressure triple plunger pump as its pressure supply. It allows you performance at a good cutting ability with good quality. It reduce the power loss, and reduce the vibration and noise at work time. It is the best choice for the customer who want good quality with low price.



HERCULES Series C50H-1

Herseus system adopts American made tie-rod intensifier. Not only avoid HP cylinder seizure, but also make system high performance and efficiency under high pressure. It is suitable for cutting medium thickness metal with high accuracy. Best choice for high-end users.

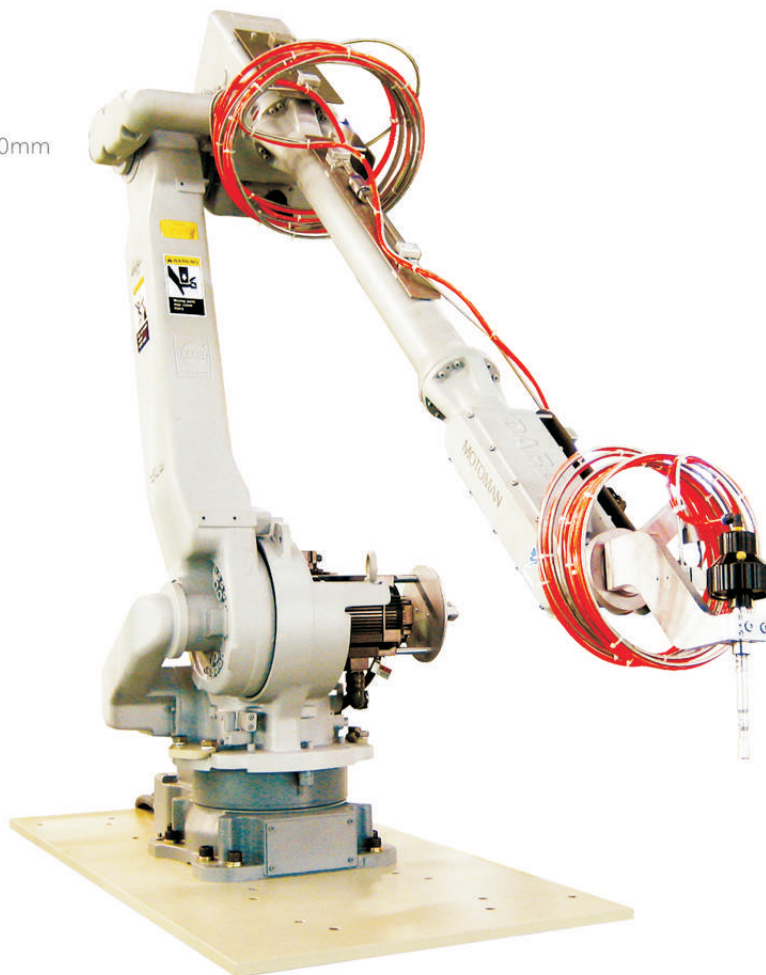


High pressure system	Basic Series	Theseus Series	Vesta Series	Hercules Series
Max. Output Pressure	300Mpa	400Mpa	420Mpa	420Mpa
Constant Working Pressure	250-280Mpa	350-380Mpa	380-400Mpa	380-400Mpa
Max. Oil pressure	15Mpa	20Mpa	22Mpa	22Mpa
Power Supply	380V/3P/50HZ	380V/3P/50HZ	380V/3P/50HZ	380V/3P/50HZ

Model	C25B	C30B	C40T	C80T	C50V	C50H1	C75H1
Max. Flow Rate	3.1LPM	3.7LPM	3.7LPM	7.4LPM	3.8LPM	3.79LPM	5.6LPM
Horse Power	25HP/18KW	30HP/22KW	40HP/30KW	80HP/60KW	50HP/37KW	50HP/37KW	75HP/56KW

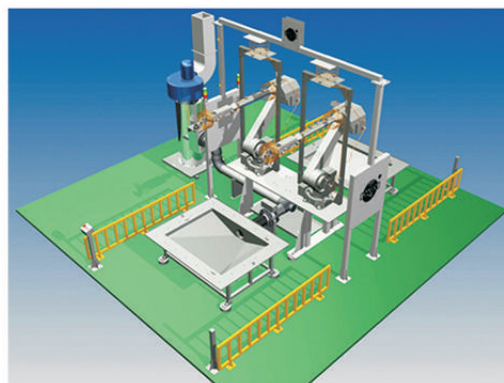
DCM Series Robotic Waterjet Cutting System

Max. working Radius: 3180mm
Max. Work Envelope Size: 2600mm x 1700mm x 200mm
Max. Cutting Speed: 300mm/s
Layout Size: 7000mm x 5500mm
Total Power: 60kw (Single Robot)
75kw (Double Robots)



CLASSIC CASE — AUTO INTERIOR CUTTING

Compared to abrasive waterjet cutting, the speed of pure waterjet cutting is faster. It can be used to cut building board, foam material and so on. The application in cutting inner ornament of automobile plays to the excellent advantages of the system. It is now the best resolution for auto parts manufactures.



DCM UHP waterjet cutting system is combined by robot system, UHP pump, water softening system, workpiece position system, vacuum adsorption system and scrap separation system and so on.

It uses the high accuracy six-axes extension arm robot system as the execture mechanism, UHP pump as the cutting energy source and die set for work-piece orientation.

The robot system is mainly used to cut Irregular space curve with smooth cutting margin. The system is automatic and efficient, intelligent flexible controlled with good applicability. The type of workpiece can be changed only by changing the die set. It owns advantages of energy-saving, environmental-protection, economical, reliable and convenient maintenance and so on. This robot cutting system is specially developed to solve the cutting problems of auto interior and ceiling.

HyperPressure Waterjet Cleaning System DTPS13530-D

HyperPressure Supply: Triple Plunger Pump
Max. Pressure: 300MPa
Max. Flow Rate: 23L/min
Horse Power: 12kw/160HP
Power Supply: Diesel Engine/Motor
Optional Qty. of Cleaning Guns: 2-3



ULTRA-HIGH PRESSURE WATERJET CLEANING

Ultra-high pressure waterjet cleaning technology is a newly developed high-tech in the world, mainly making use of high-speed waterjet for cleaning surface hard dirt. With water as medium, it drives large-flux high-pressure pump through electromotor or diesel set to pressurize the water to be 40000psi (300MPa), and then ejects the water through single/multiple ruby nozzles in the type of Ultra-high pressure revolving waterjet for cleaning operation.

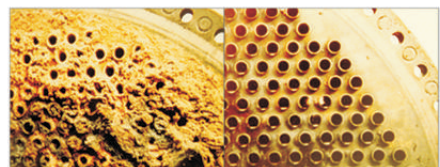
Comparison before and after cleaning



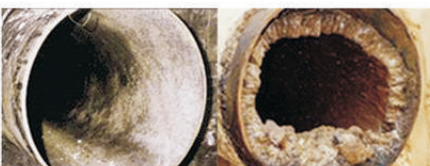
fixed blade in power plant



coil heat exchanger



heat exchanger



gas pipe



turbine rotor



ship

DEM series Bridge CNC Grinding Machine DEM2515-BB

DEM2515-BB

Main technical parameters

Bridge travel: 2500mm

Base travel: 1450mm

Z-axis travel: 200mm

Grinding Accuracy: $\pm 0.1\text{mm}$

Amount of grinding heads: 1-2

Spindle power: 5kw

Spindle rotate speed: 15000rpm

Spindle handles: BT30

Power: 220V/380V/415V, 50/60HZ

Note: Other size working tables are also available.



CNC edge grinding machine is for shaped stone and glass processing, it can finish the edge grinding process at one time with high precision, high efficiency, smooth processing surface.

DMW series waterjet machining centre DMW3020-BB

DMW3020-BB

Main technical parameters

Bridge travel: 2500mm

Base travel: 2000mm

Z axis travel for cutting head: 210mm

Z axis travel for grinding head: 350mm

Cutting Accuracy: $\pm 0.1\text{mm}$

Grinding Accuracy: $\pm 0.1\text{mm}$

Amount of grinding heads: 1-2

Amount of tools: 10把

Spindle power: 7.5kw

Spindle rotate speed: 18000rpm

Spindle handles: BT30

Power: 220V/380V/415V, 50/60HZ

Note: Other size working tables are also available.



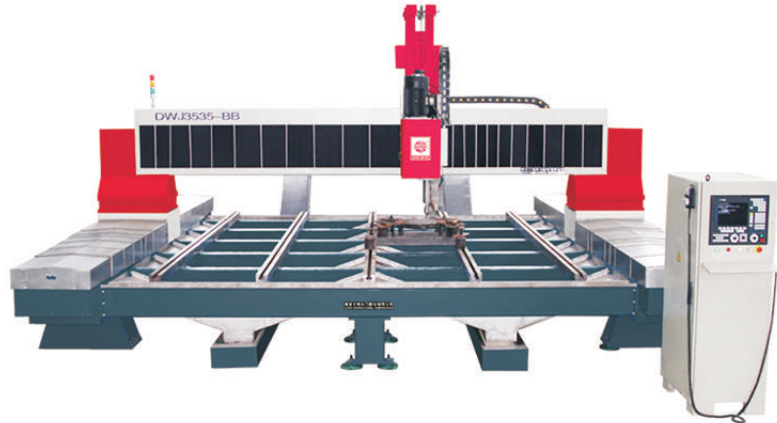
Multifunctional waterjet machining center is design for complex shaped processing but hard to fix position again, it especially suit for the processing of Grinding, Milling, Boring, Drilling after waterjet cutting process.

DWZ3535 series drilling machine DWZ3535-BB

DWZ3535

Main technical parameter

Bridge travel: 3500mm
Base travel: 3500mm
Spindle travel: 350mm
Drilling Accuracy: $\pm 0.1\text{mm}$
Max working piece: $4000 \times 4500 \times 200\text{mm}$
Spindle power: 7.5kw
Spindle rotate speed: 136-1270rpm
Spindle taper: Morse taper shank drill 5#
Max drilling hole: $\Phi 50\text{mm}$
Scrap removal machine: 2台
Power: 0.4kw/台
Capacity of scrap removal: 15-20kg/min
Note: Other size working tables are also available..
Optionals: tool storage , auto tool changer function.

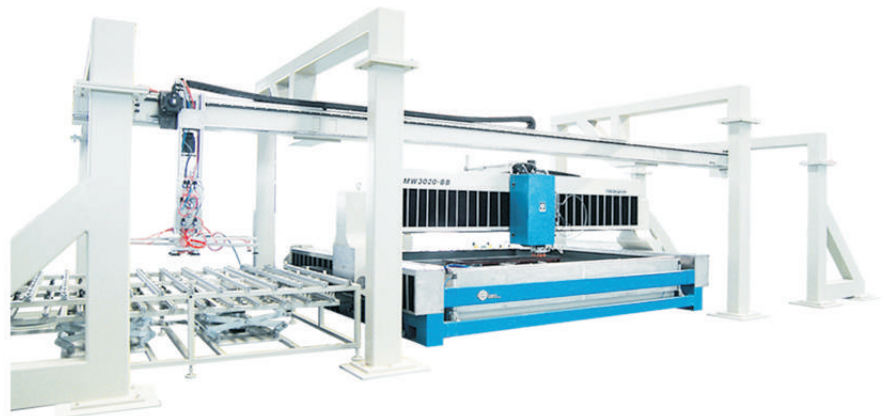


CNC Planer Drilling Machine is suit for the drilling of metals and non-metals big workpiece, it especially suit for the drilling of boiler/heat exchanger/Chemical Engineering Equipment that want to drill a lot of holes. The Max. drilling diameter is 50mm, you can choose optional Automatic Tool Changer.

Auto loading and unloading material system

Main technical parameter

Cutting area
L×W×H: $2600 \times 1700 \times 200\text{mm}$
layout size (single robot double station)
L×W×H: $2600 \times 1700 \times 200\text{mm}$
Max working radius: 3160mm
Max cutting speed: 300mm/s
Max working pressure: 380Mpa
Max orifice: $0.23\text{mm} \times 2$
Total power(single robot): 60kw
Total power(double robots): 75kw
Power: 220V/380V/415V, 50/60HZ
Note: Other size working tables are also available.



It use high precision 2D or 3D special lengthened manipulator system, place around the machining equipment , it can automatic load and unload workpiece, it automatic work cooperate with machining equipment very well.

X4 cutting system

X4-III

X4 is DARDI professional solution for High quality ceramic & stone mosaic cutting craft, and also good solution for vanish curve during metal cutting. It is used in handle polishing and precise assembling during mosaicing, also do curve compensation during metal cutting via cutting head gesture modification, X4 increased efficient and quality control in above craft.

High quality mosaic assemble

- ※ It is developed to III non-polish precise assembling technology
- ※ X4 smart dynamic cutting, it is saving time and procedure, good choice for mosaic.
- ※ X4 match with DARDI SP10 cutting head, professional match for mosaic

Metal non-curve cutting

- ※ Adjust the running gesture and modify cutting angle, to achieve non curve cutting.
- ※ X4 is a characterized system, can achieve all different request during cutting
- ※ X4 can achieve groove cutting

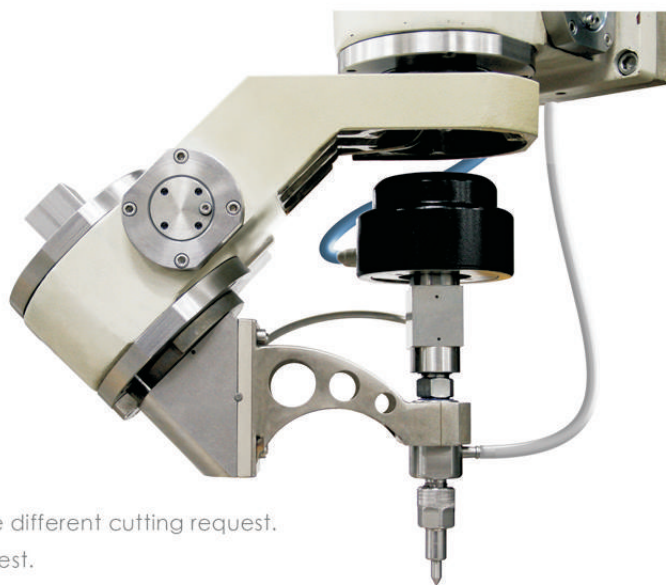


DARDI 5 AXIS CUTTING SYSTEM

X5- II

X5 SYSTEM IS DARDI professional solution for senior metal working industry, X5 system plus rotation and tilting axis to modify cutting head gesture during cutting, to achieve groove cutting and tilt cutting.

- ※ During the scope of 0-90 degree, X5 can do any cutting, and easily change during 2D/3D.
- ※ ESA(ITY) CNC and Lantek nesting programming, professional, simple, and reliable.
- ※ Mounted in DARDI Bridge series cutting table, can achieve different cutting request.
- ※ Can achieve tilting, groove, chamfer and all cutting request.



Auto distance adjusting system

Air Pressure: 0.6Mpa
Travel: 50mm

It can avoid nozzle collision when cutting large metal plate with irregular or warped surfaces. It can auto control distance between cutting head and workpiece, reduce manual tool setting mistakes and labor.



Water softening system

Capacity of water output: 1t/h
The requirement of Water hardness: $\leq 0.03\text{mmol/l}$

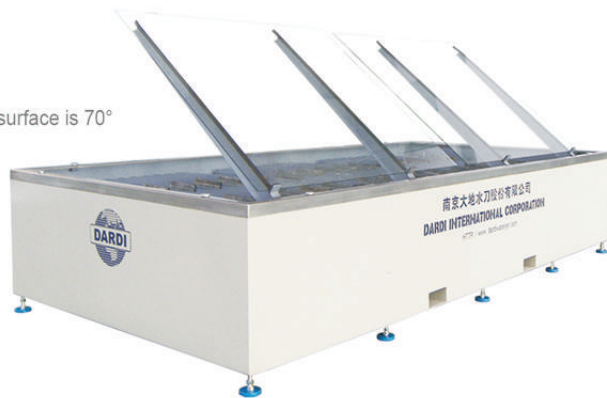
It can be used to eliminate calcium and magnesium ions, so to extend the lifetime of HP parts such as HP seal kits, orifice and so on. The output can reach 1 ton/hour and serve several machines simultaneously.



Auto roll-over working table

Turning Angle: the Max. angle between the support and the horizontal surface is 70°
Max. Loading Capacity: 350kg

It can solve the continually loading and unloading during batch production and directly improve the working efficiency. Roll-over angle is 70° . Options for abrasive removal, orientation and water level controlling.



Auto abrasive delivery system

Air Pressure: 0.6Mpa
Capacity of Abrasive Transport: $>90\text{kg/h}$

Provide abrasive storage function for waterjet cutting machine. Auto deliver abrasive into the hopper with simple operation, high efficiency and low labor intensity. 170L capacity can continually supply abrasive for 500 to 800 minutes cutting.



Cooling tower

Wet-bulb Humidity: 28°C
Capacity of Cooling Water: $5\text{m}^3/\text{h}$

This economical and practical system can effectively control the oil temperature when the high pressure system is running, achieve longer lifetime of HP parts and greatly reduce the waste of water.



Oil cooling system

Power: 6.2Kw
Cooling Capacity: 12Kw

This system will forced cooling the hydraulic oil to improve the running condition of hydraulic system, increase the continues working time and extend lifetime of machine.



Auto abrasive removal system

Power: 2.2Kw
Capacity of Abrasive Remove: 200L/h

It can quickly suck out the mixture of waste abrasive and materials. These waste were collect them in a tank, then exhausted after precipitation.



DARDI NEWCAM SOFTWARE

The newcam waterjet cutting special software equipped to the waterjet cutting machine is specifically customized for DARDI by Taiwan Newage. Newage is a company with over ten year experiences on developementing on waterjet cutting special software. The main functions are as follows:

- ◆ Auto- transforming .DXF files into CNC program, Auto-typeset nesting, Auto calculate the cutting length, time and cost ,Auto-cutting in/out control,auto generate the cutting track;
- ◆ Cutting track auto-simulation function - corner deceleration, leave material control, bypass control, auto cutting kerf compensation;
- ◆ An open database, it can store different materials related cutting parameters, auto-load cutting parameters by mouse click;
- ◆ New true shape outline typesetting, powerful auto-typesetting system, efficiency doubled;
- ◆ Common and material set typesetting system, including two or more workpiece common edge typesetting, easy operation, meet common edge typesetting need;
- ◆ Provide plate database, users can set up own plate information and inventory, sync-manage plate status;
- ◆ New excess material management function, store the remaining plate as excess material for second use, improve plate utilization rate.



CNC SYSTEM

DARDI CNC system all have the following functions:

①go on along the original track after return; ②the cutting path smooth transition; ③auto deceleration at small aperture, holes arc, cutting edges or corner; ④real-time graphics simulations.

DWJS-101/201(pc) system

This system is a new-type special control system developed based on rich engineering experience in waterjet cutting control. The complete software function and human design in keys layout and application interface make convenient operation.

- ◆ Program transfer and remote transmission between USB and RS485, USB onlineDNC processing;
- ◆ Independent Ethernet interface with networking operation can realizes remote demonstration, diagnosis and software remote update;
- ◆ Powerful image simulation can realize 3D and 2d simulation, embedded AUTOCAD and NC software seamless interface, which can be directly processed CAD graphics.

DWJS - 101 system: 8M storage, 10.4" TFT truecolor digital screen, 5 axis control system.

DWJS - 201 (PC) system has not less than 2GB storage, 17" LCD color screen, 5 axis control system;

This system has unique water jet system online CAM/CAD ability, efficient ability to design while



FAGOR system

Based on 13 years close cooperation with FAGOR, it integrates FAGOR control technology with applicability of waterjet cutting products so it is more of amenity with convenient programming, operation and maintenance, providing high-grade, efficient and professional waterjet CNC system.

- ◆ Convenient transmission with various communication mode including USB, RS232, RJ45 etc.;
- ◆ Advanced DNC online processing function can realize directly remote processing;
- ◆ Unique plate correction, breakpoint memory and feeding shaft cross-compensation function.

FAGOR8035 system: 128M storage, 7.5" LCD color screen, 3 axis control system.

FAGOR8055 system: 512M storage, 10.4" LCD color screen, 4/8 axis control system.



ESA system

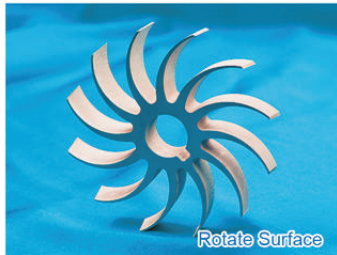
The waterjet cutting professional NC system, developed by DARDI and ESA, optimizes former operation interface with strong interaction and easy operation, adopts modularization design with high stability and antijamming capability.

- ◆ Convenient transmission with USB interface and RJ45 communication interface;
- ◆ Lead high quality no fan embedded industrial PC can install various software;
- ◆ Visual multi workpiece origin setting is particularly convenient for small batch and multi-variety cutting;
- ◆ Docked shaft function, can be in the machining process outages and maintenance, and can be easily return to work;
- ◆ Arbitrary section processing function can be realized by clicking graphics.

ESAs500/530 system: 150G storage space, use 17" LCD color LCD screen, 4/8 axis control system.



We have much more applications in your industry,
not only these.....



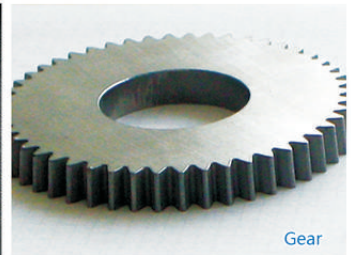
Rotate Surface



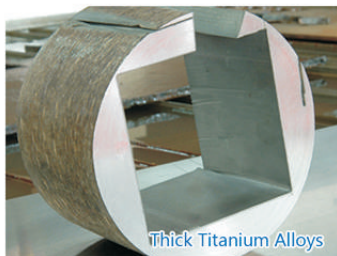
Conical Surface



Stainless Steel



Gear



Thick Titanium Alloys



Precision Cutting



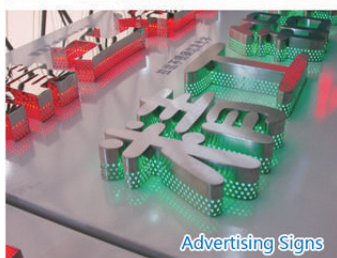
Military Manufacturing



Pressure Vessel



Aircraft Industry



Advertising Signs



Shipbuilding



Mechanical Fabrication



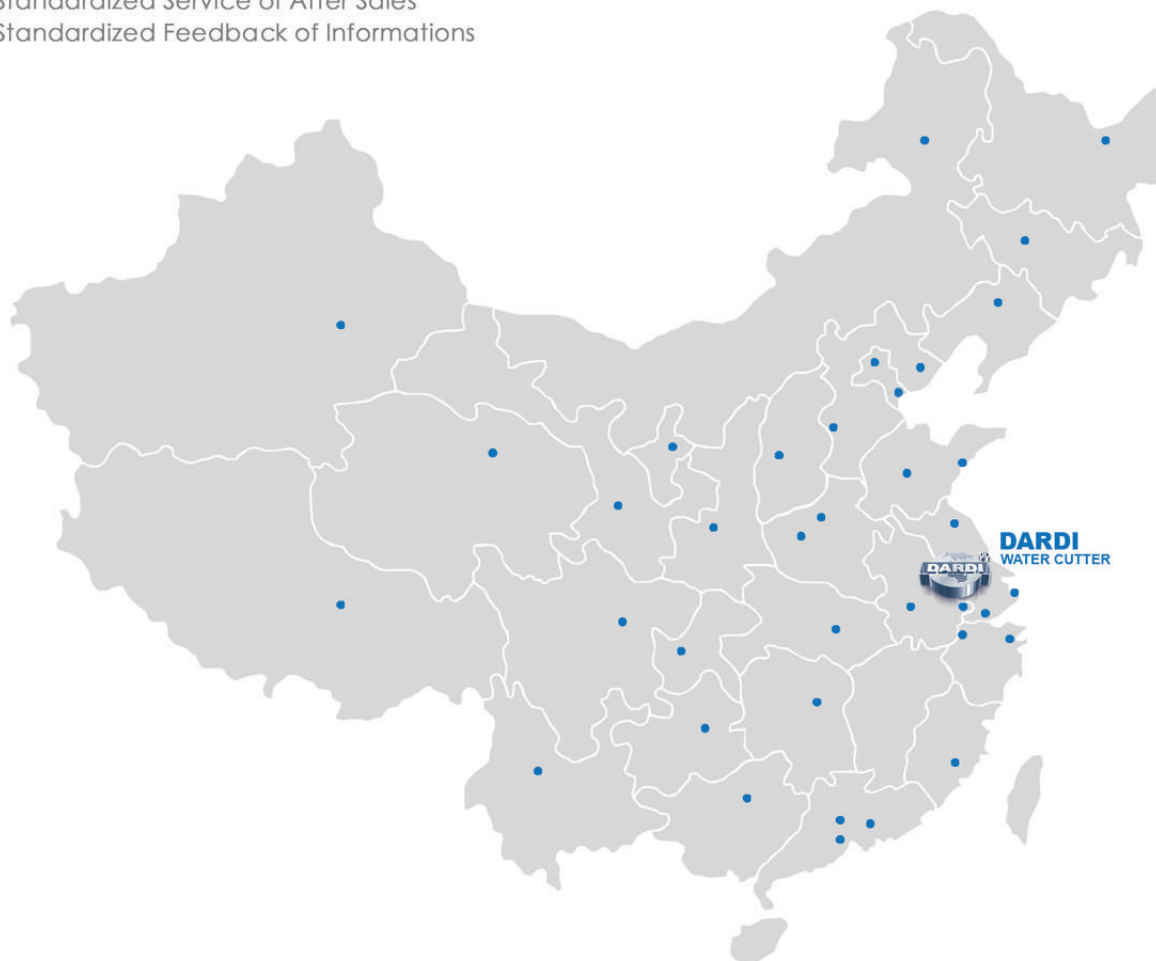
Electrical Equipment



Locomotive Manufacturing

DARDI: THE NEW "4S" SERVICE ERA

Standardized Sales of Complete Machines
Standardized Supply of Spare Parts
Standardized Service of After Sales
Standardized Feedback of Informations



Whole Process/Professional/Express/Consideration/Trust

One-Stop Expert Service from Dardi

we are right here beside you!



Complaints hotline: **025 57354400**

————— *Honesty Professionalism Innovation Transcendency* —————

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