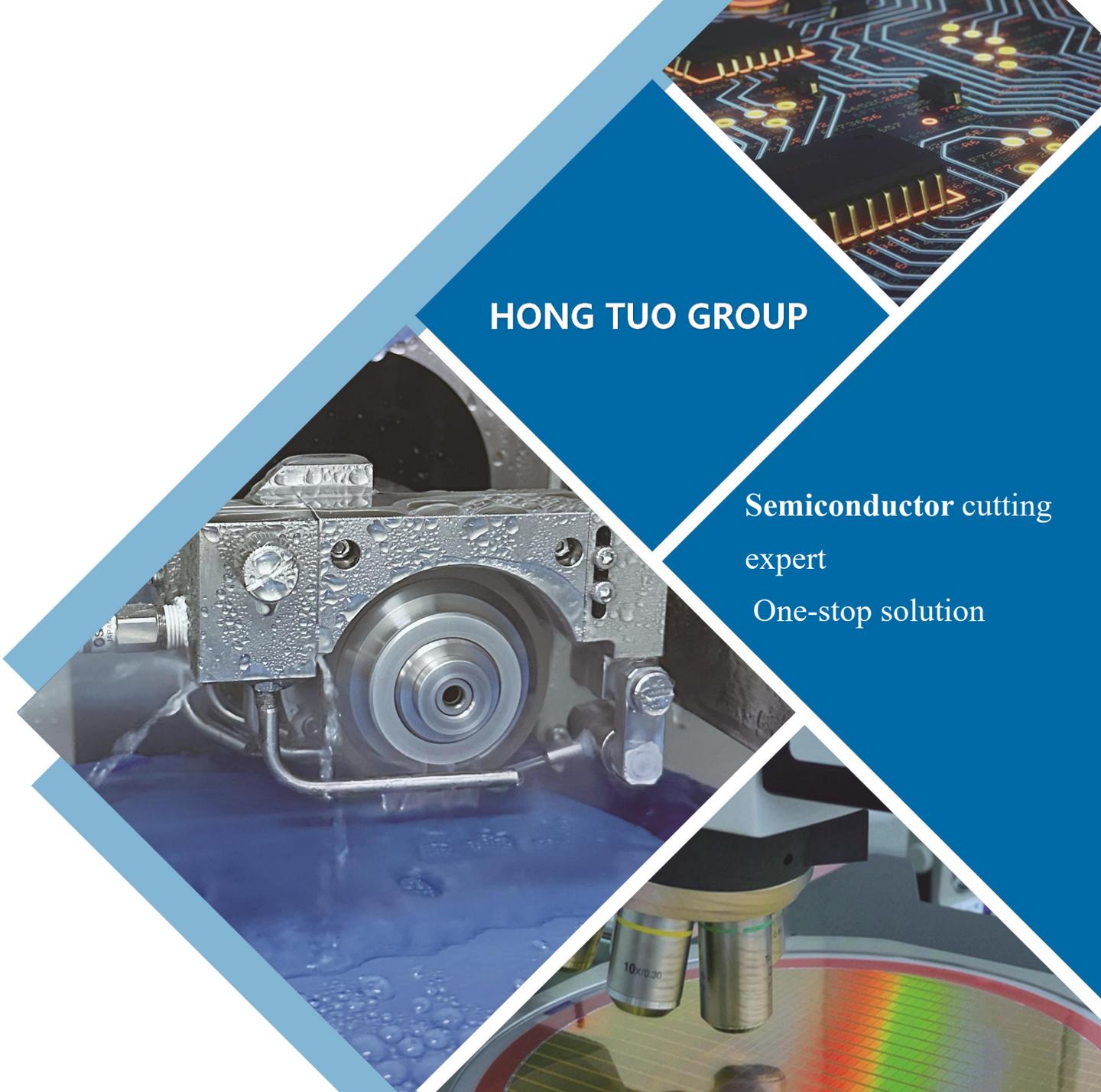




**HONG TUO
GROUP**

**The leader in one-stop precision
processing services**
**Comprehensive precision processing
solutions**



HONG TUO GROUP

**Semiconductor cutting
expert**
One-stop solution



01

Company Profile

02

Product Introduction

03

Cooperative Clients

04

Product Line

05

Quality and Service

01 Company Introduction



Zhengzhou Qisheng precision manufacturing Co., LTD

Founded in 2013, the company is a high-tech enterprise with ISO 9001:2015 quality management system certification, located in Jiulong Industrial Park, Zhengzhou City, covering an area of 76 acres.



Scope of Business	manufacturing, sales of dicing saw equipment, dicing blade & grinding wheel, diamond & CBN superabrasive tools, technical service.		
Main Products	dicing saw machine, other auxiliary tool (chuck table, dressing board, dicing blade (resin & metal), back grinding wheel, optical fiber grinding wheel etc.		
Sales Volume	Exceeding 65 million annually	Firm Nature	Privately operated
Employees	Totally 295 (Technical, R&D 85 + Manufacturer 210)		
Designing Capability	Customized		
Production Capacity	Grinding Wheel: 10000 pcs/month Dicing blade: 40000 pcs/month Dicing machine: 20 pcs/month		

Three-System Management

We got Quality Management System ISO9001 Certification in 2006; Environmental & Occupational Health & Safty Management System ISO14001 & ISO45001 in 2022 regularly audited & supervised by professional certification every year.



Technical Patents

Got totally more than 30 patents:

- 《Blade Thickness Measuring Tool》
- 《Qi Sheng scribe control software》 etc.



Application industry

Packaging industry

IC packaging-QFN
DFN
BGA
WLCSP
TF/SD card
LED packaging
EMS

Discrete device industry

ceramic substrate
Capacitive substrate
PZT
Thermistor ceramics
strontium carbonate
ferrite
diode,
audion,
silicon controlled
ceramic

Optical communication

Faraday
PLC branching unit
PLC chip
ceramic ferrule

Optical device industry

optical filter
lithium niobate
prism
artificial crystal
white glass
blue glass

Radio frequency

lithium tantalate
lithium niobate
quartz wafer
Resonator/filter/diple
xer

LED Chip industry

gallium arsenide

Semiconductor industry

silicon wafer
sapphire

02 Product Introduction

Scope of business: R&D, production, sales & service of precision dicing machine, dicing blades, chuck table, grinding wheels and other super-hard material grinding tools and tool products.



10"



6"



Cleaning
machine



Film machine



Resin blade



Metal blade



Special blade



Ceramic table



Thinning table



Cleaning table



Sapphire thinning
wheel



Silicon wafer
thinning wheel



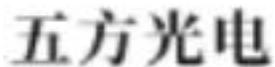
Cutting wheel



Dressing board

03 Cooperative clients

They choosed us!



03 Cooperative client

They choosed us!



04 Product line display

Dicing machine product line

➤ Products:

- 1、 6”machine D0620, D0630 series, for 6” wafer, cutting of multiple square pieces within 160X160
- 2、 10”machine D1030 series, for 8”, 10”,12” wafer, cutting of multiple square pieces within 300X300

➤ Application fields: precise cutting in fields such as electronic components, integrated circuits, optical devices, optical fiber devices, and IC packaging.



6”



Upgraded 6”



10”

04 Product line display



Dicing machine supporting equipment

Cleaning machine: It is applied to the cleaning and drying of materials such as wafers, silicon wafers, ceramics, and QFN after cutting, Equipped with a cleaning swing arm/drying arm and a rotating chuck.

Configurable atomizing cleaning nozzles, high-pressure nozzles and nitrogen drying are available to meet various cleanliness requirements.



Cleaning machine	QSW-12A
Workpiece dimension	Max OD Φ 380mm Max square shape 275mm*275mm
Wafer size	6、8、12 inches
Cleaning mode	Water and air two-fluid
RPM	100-2500 r/Min
Cleaning/drying time	0-999 Sec
Cleaning nozzle speed	1-37.5 θ /sec
Air supply Pressure	0.5-0.6 MPa
Water supply pressure	0.2-0.4 MPa
Voltage	220 VAC
The machine's dimensions width x depth x height	500x645x1430 mm
Machine weight	150 Kg

04 Product line display

Dicing machine supporting equipment

Film machine: for the film application process before cutting materials such as wafers (thin sheets), glass, and substrates, equipped with precision guide rails and a temperature control system, making the overall performance of the machine stable and the operation convenient & fast.

Adopt blue film, UV film, PET substrate film and other single/double-layer films.



Name	Film machine
Code	QSF-08A
Nominal voltage	AC220V
Rate of work	<400W
Air pressure	0.5-0.6MP
Applicable types of films	blue & white film、UV film
Thickness of the adhesive film	0.05-0.2mm
Workbench heating function	30°C-70°C
Pulling film type	By hand
Film application method	By hand
Size	8''
Special workbenches	Optional
Weight	85kg

04 Product line display

Dicing machine supporting equipment

UV degumming machine: The de-gumming process for wafer, glass and ceramic cutting processes. At present, it is not limited to the semiconductor packaging industry but also applicable to the de-bonding of UV films on semiconductor materials such as optical lenses, LED, IC, semiconductors, integrated circuit boards, and portable hard disks.



Equipment model	QSP-12A
Workpiece dimension	Smaller than 12''
LED type	Ultraviolet LED ultraviolet wavelength 365nm
Irradiation power range	400 mw/cm ²
LED life	2W-3W hours
Optional charging voltage	100-240VAC 50/60HZ
Overall dimensions	480x580x420 (mm)
Weight	50kg

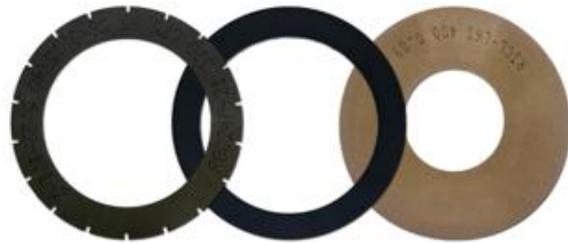
04 Product line display

Dicing blade product line

➤ Product:

- 1、 Resin blade
- 2、 Metal blade
- 3、 Trimming blade for advanced packaging
- 4、 Dressing board

➤ Application fields: dicing processes in fields such as IC packaging, optical communication, optical devices, and wafers.



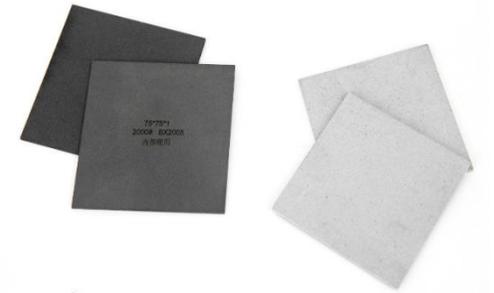
Resin packaging blades
(QFN/DFN)/ceramic board)



Metal
blades(BGA/LGA)



trimming
blade



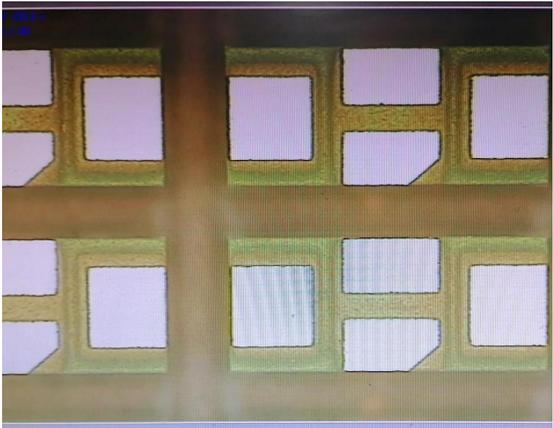
Dressing board

04 Product line display

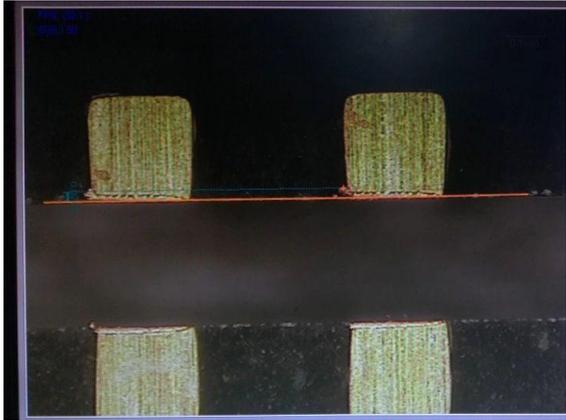
Workpiece display



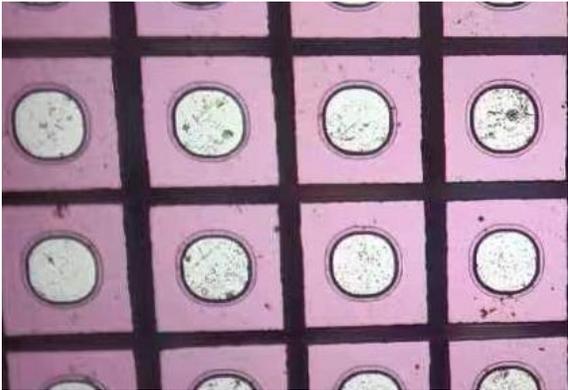
Wafer



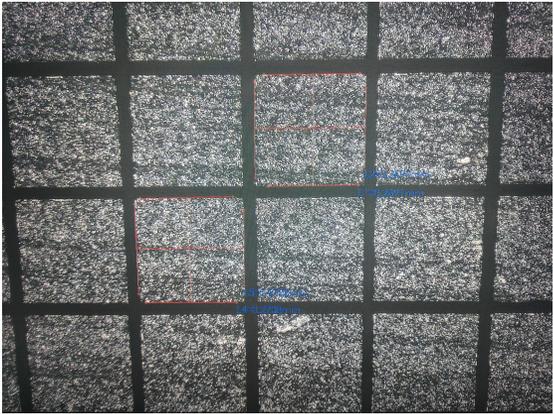
PCB



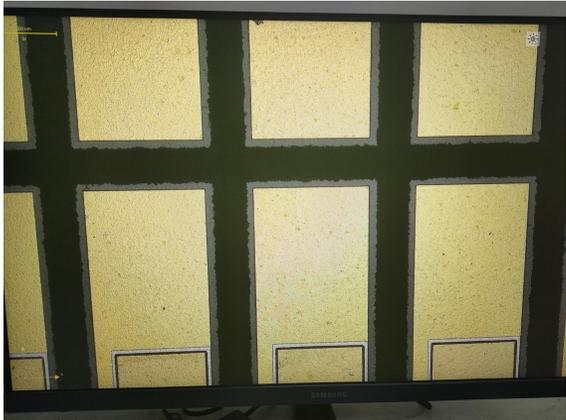
QFN



Gallium arsenide



Bismuth antimonide



Ceramic

04 Product line display

Precision grinding product line

- Products:
 - 1、 Precision equipment matching with chuck table
 - 2、 Precision back thinning wheel
- Application fields: adsorption & support in the semiconductor chip production process, used for thinning and fine grinding of semiconductor wafers.



Dicing machine
matching chuck
table



Precision thinning
machine chuck
table



Silicon wafer
thinning grinding
wheel



Sapphire thinning
wheel

05 Quality and service

Quality control - Process control

Control the production process through advanced quality management tools:

FMEA: failure mode and effect analysis

QCP: quality control plan

SPC: statistical process control

MSA: measurement systems analysis

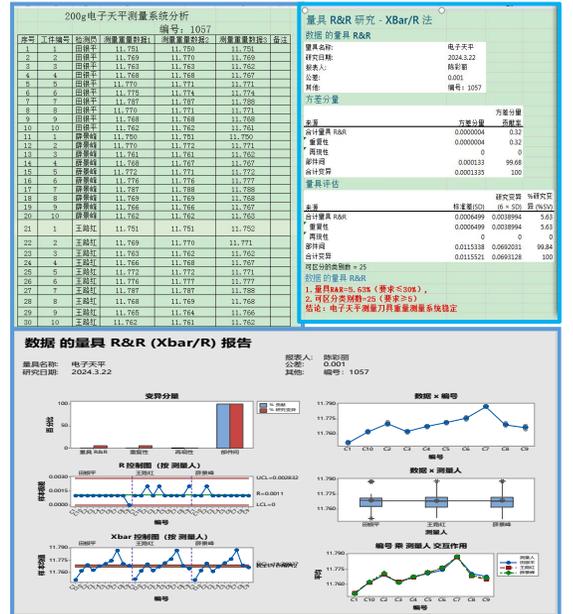
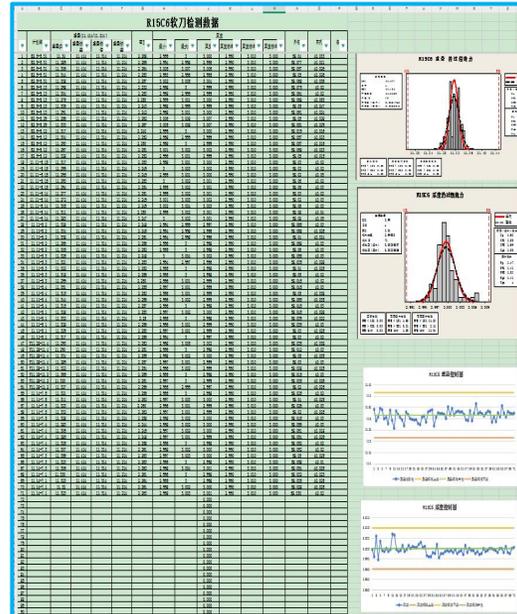
DFMEA

顧客及製造方式失效分析 (設計 FMEA)

項目	失效模式	失效原因	失效後果	嚴重度	發生率	探測率	RPN	改善措施	實施日期	實施人
...

製鋼刀片控制計劃 Control Plan

Process Name	Process Description	Product	Process Step	Characteristics	Product/Process	Evaluation/Measurement Tech.	Frequency	Control Method	Reaction Plan
...



FMEA

QCP

SPC

MSA

05 Quality and service

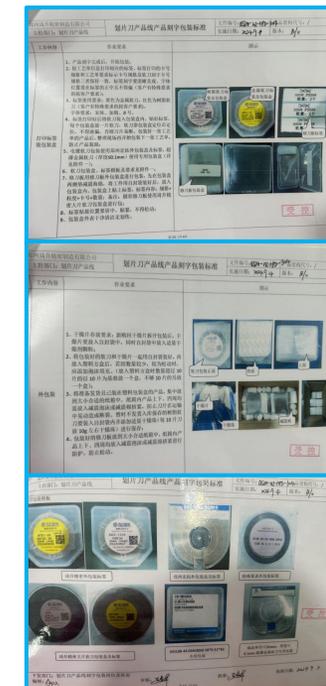
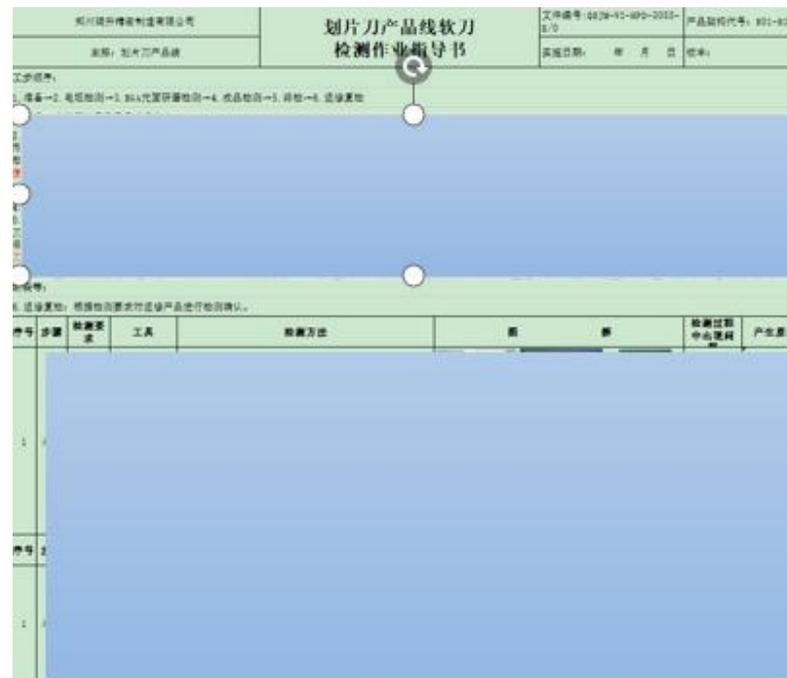


HONG TUO GROUP

Quality Control - Process documents

Complete process documents: Raw material technical conditions & inspection procedures, production process operation procedures, control plan sheets, semi-finished product quality inspection procedures, finished product inspection operation instructions, quality anomaly handling procedures, equipment maintenance guidance cards, etc.

剃须刀片控制计划Control Plan										
Product Name: 剃须刀片 Control Plan No.: QM-4006-01		Issue Date: 2023.10		Revision: 01		Issue Date: 2023.10				
Customer Engineering Requirements: 1) Raw Material Technical Conditions, 2) Inspection Procedures, 3) Production Process Operation Procedures, 4) Semi-finished Product Quality Inspection Procedures, 5) Finished Product Inspection Operation Instructions, 6) Quality Anomaly Handling Procedures, 7) Equipment Maintenance Guidance Cards, etc.										
Part/Process Name	Process Name	Material/Process	Product Name	Process Name	Characteristics	Process Parameters	Control Method	Inspection Method	Inspection Frequency	
剃须刀片	原料	电子天平	天平校准	天平校准	±0.01	校准	校准	校准	校准	
		量块	量块校准	量块校准	±0.001	校准	校准	校准	校准	
		游标卡尺	游标卡尺校准	游标卡尺校准	±0.02	校准	校准	校准	校准	
	工序	冲压	冲压	冲压	尺寸	±0.05	目视	目视	目视	每班次
		磨削	磨削	磨削	表面粗糙度	0.4	粗糙度仪	粗糙度仪	粗糙度仪	每班次
		抛光	抛光	抛光	表面粗糙度	0.1	粗糙度仪	粗糙度仪	粗糙度仪	每班次
		清洗	清洗	清洗	清洁度	目视	目视	目视	目视	每班次
		包装	包装	包装	包装	目视	目视	目视	目视	每班次
		检验	检验	检验	检验	目视	目视	目视	目视	每班次
		入库	入库	入库	入库	目视	目视	目视	目视	每班次



Control Schedule

Finished Product Inspection Operation Instruction Manual

Operation instruction

05 Quality and service

Value-added services

- **Integrated solution:** We offer an "integrated solution" project covering equipment selection, tool fitting and process parameter setting to ensure that your equipment can be used immediately upon startup.
- **In-depth technological development:** Our company has established a powerful process laboratory and has been deeply engaged in the technology of cutting and dicing for many years, enabling us to quickly solve technical problems.
- **Frontier exploration capability:** Relying on a powerful process laboratory, we offer you free exploration of the application feasibility of new materials and new processes, reducing your R&D risks and costs.
- **Attentive service:** Exclusive technical team and after-sales support team full escort, a thorough understanding of your needs, provide optimal configuration scheme, a quick fix to your current problems, to provide remote guidance or on-site support. We're are your stable technical backing.

Process
Laboratory

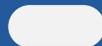




Thank you for your watching!



Alibaba Shop



////////