JCL Precision Part Co. Ltd

JCL is a team of engineer who lego Trust, Integrity and Communication as our core value to provide our customer the best balance in Quality, Time and Cost. Since the opening in 2012, CSL has exponential growth in revenues, thus allowing steady expansion in team member, capability and capacity.

Add: **Building A, No. 2 Shiquanling Road, Zhenjiang Sub-district, HZZK Hi-tech Industrial Development Zone, Huizhou**

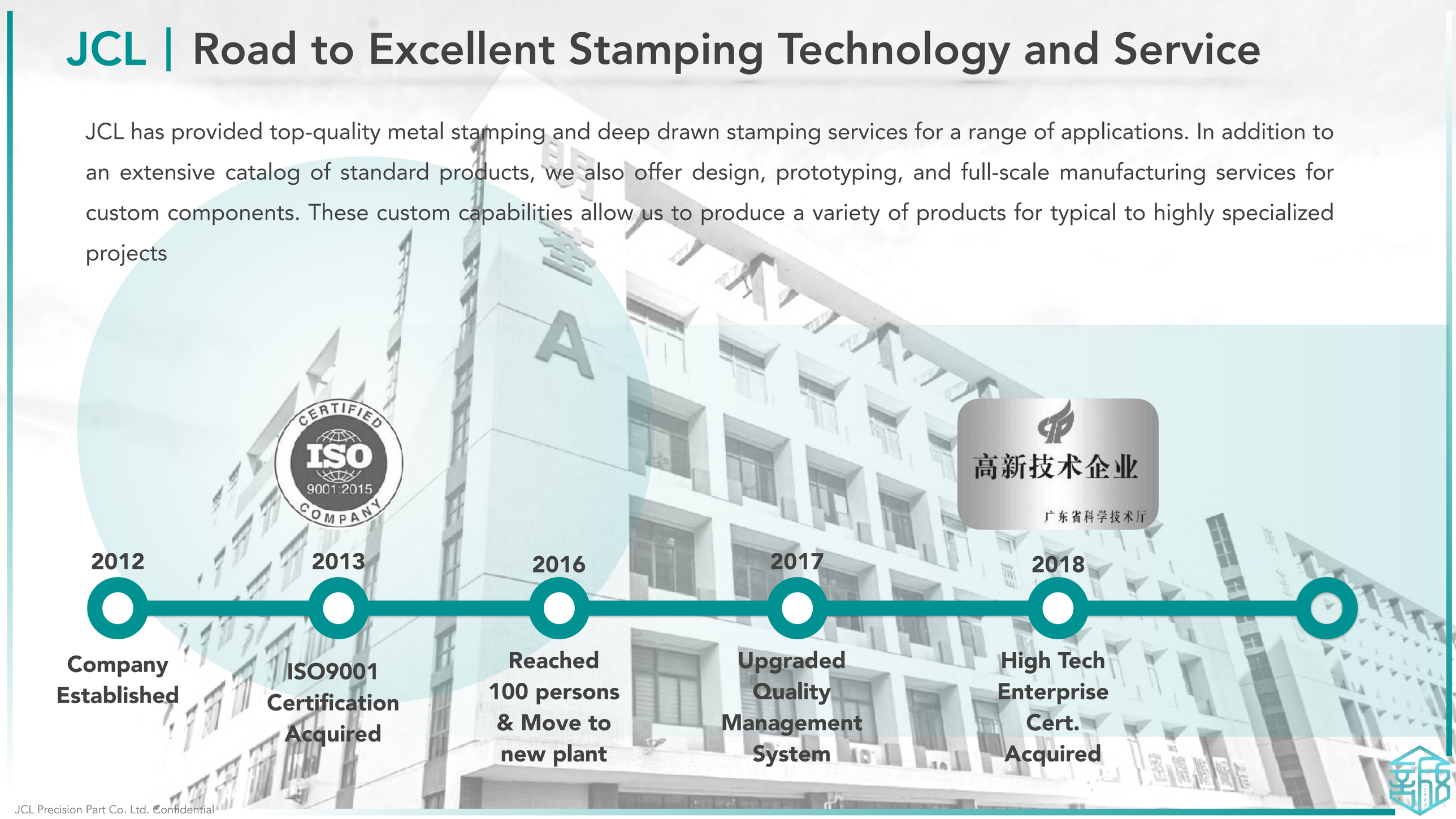
Home: **www.jcldd.com**

Tel: **+86-13809633458, +86-13510277150, +86-0752-3161136**

JCL Precision Part Co. Ltd. Confidential

JCL | Road to Excellent Stamping Technology and Service

JCL has provided top-quality metal stamping and deep drawn stamping services for a range of applications. In addition to an extensive catalog of standard products, we also offer design, prototyping, and full-scale manufacturing services for custom components. These custom capabilities allow us to produce a variety of products for typical to highly specialized projects



2012 — Company Established

2013 — ISO9001 Certification Acquired

2016 — Reached 100 persons & Move to new plant

2017 — Upgraded Quality Management System

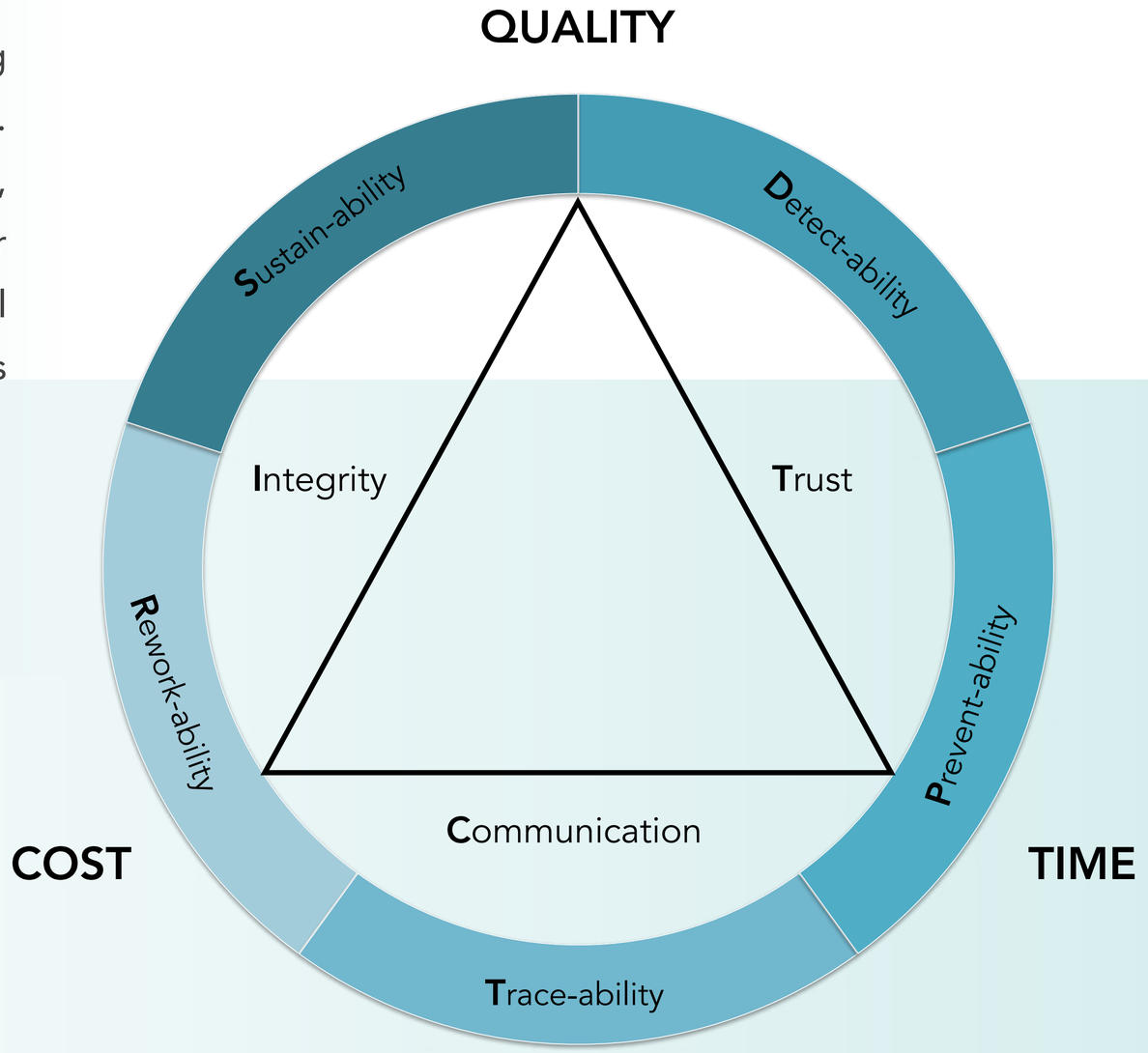
2018 — High Tech Enterprise Cert. Acquired

JCL | Company Core Value

Our team has developed extensive knowledge and skills regarding the design and manufacture of standard metal parts and products. This expertise, combined with our customer-focused approach, enables us to produce high-quality custom components. Our technical support team works closely with customers throughout all stages of custom projects to ensure their specifications and standards are fully met.

"Forged meaning, build identity"

JCL acquired over 20 Utility Model Patent



JCL | Customer Process Flow

Request for Quote
报价处理

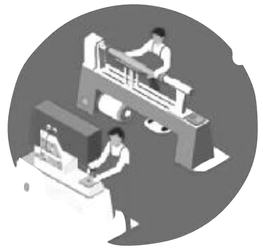
Reach out to us today for more information about how we can help with your next project.

Purchase Order Received
订单获取

When P.O is received, our team enters it into the system . Production Control schedules the production of the project, including raw material scheduling and production time.

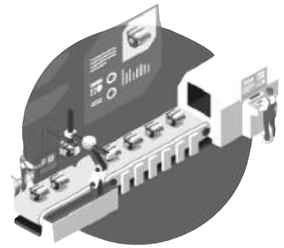
Engineering & Tooling
工程开发/模具设计

Using the latest in computer technology, our Design Engineers will create the tooling. Next, we begin the custom tool build.



Production Control
制程管控

After a purchase order is received and the team enters it into the system, Production Control schedules the production of the project.



Production Floor
生产车间

We offer a wide array of presses to accommodate a wide array of project and tooling types.

Finishing Process
后处理工艺

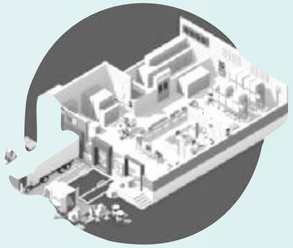
Our 5-axis laser cutter. With this process, we are able to produce secondary holes, slots and flanges in delicate 3D metal parts without adversely affecting the part integrity.

Annealing Process
退火工艺

In the furnace, the parts move continually on a metal mesh belt. Normal start to finish time in the humpback furnace is one hour.

Quality & Inspection
品质检验

Our Quality and Inspection capabilities are truly top-class, with the high-end equipment and an expert team who is constantly being trained in new methods to stay ahead of the curve.

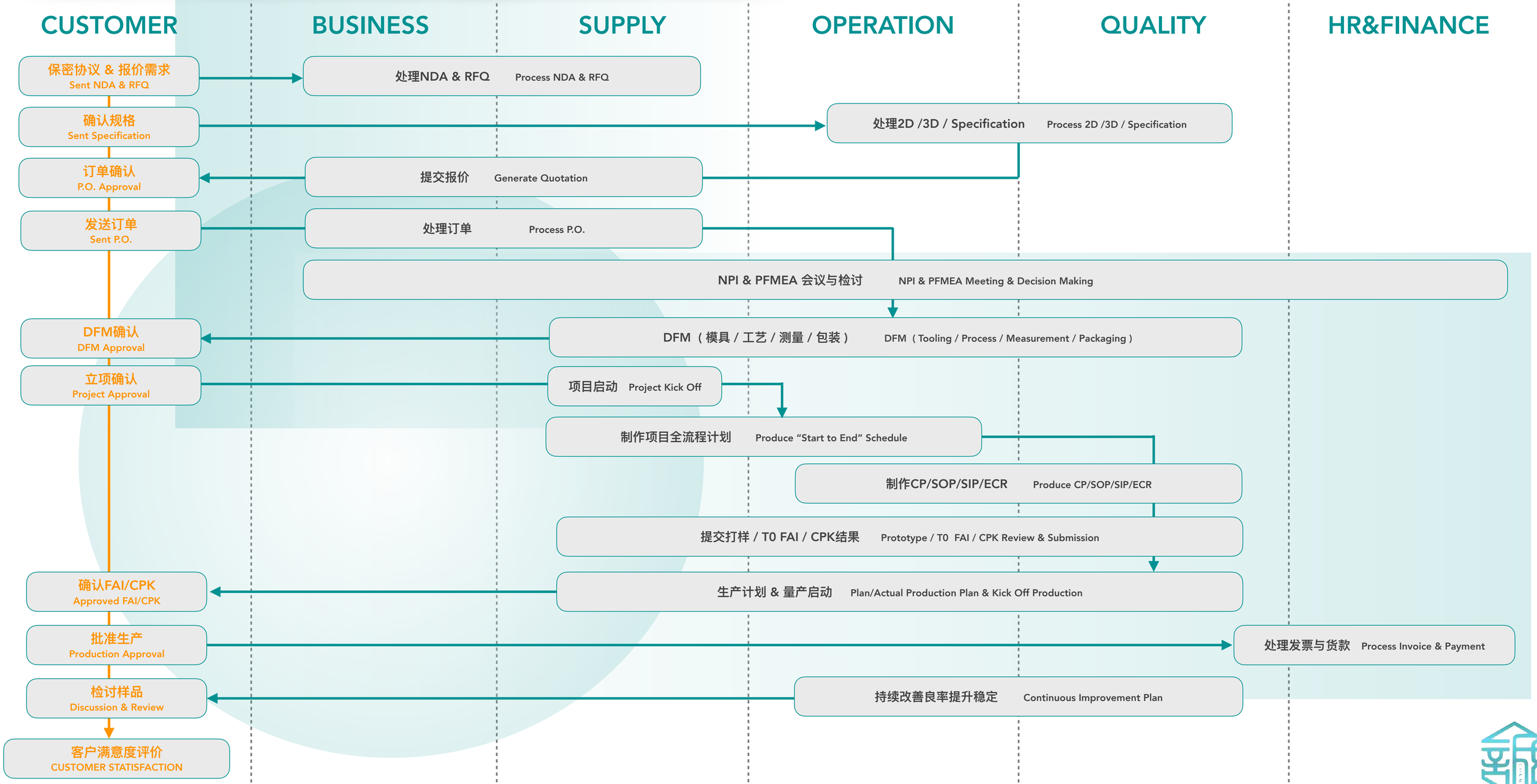


Packaging & Shipping
包装/运输

The last stop parts make is at the packing and shipping areas. Here, parts are carefully hand-packed based on customer requirements, and our goal is to meet or exceed customer expectations.

JCL Precision Part Co. Ltd. Confidential

JCL | Project Management Flow

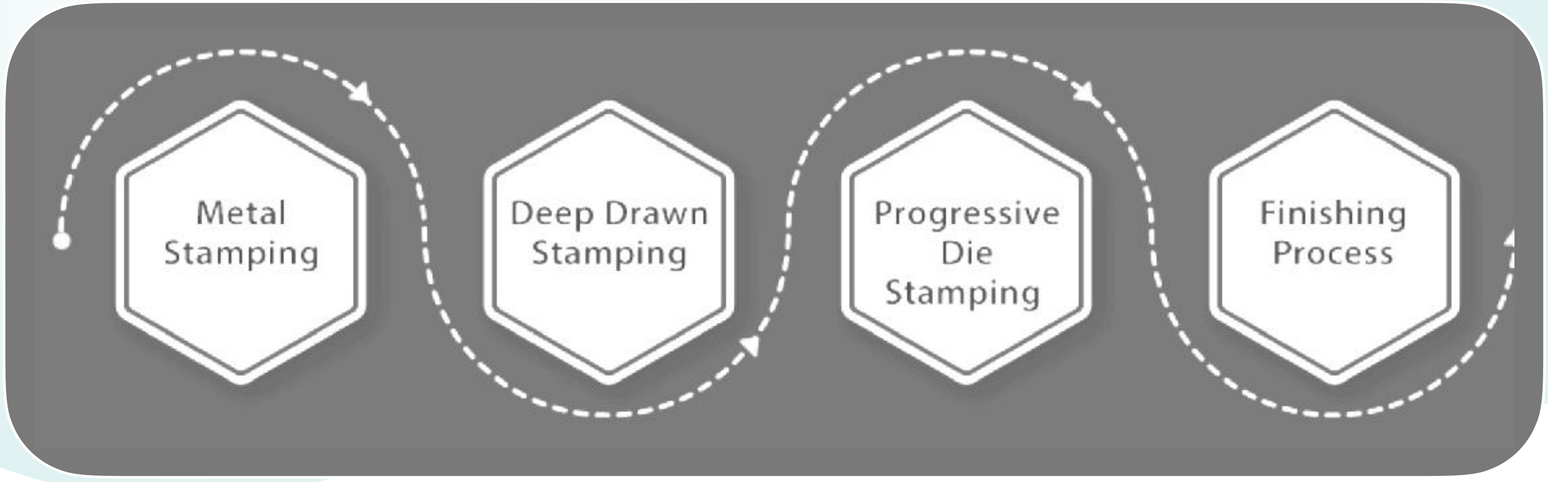


JCL Precision Part Co. Ltd. Confidential

JCL | Deep Drawn Stamping Capability

Metal stamping is an term that encompasses a wide range of manufacturing processes, all of which utilize stamping presses and dies to transform flat sheets of metal into the desired component. The experts at CSL Stamping offer the following stamping capabilities:

- **Standard Stamping:** Standard stamping operations employ standard tooling to produce stampings. While the tooling is not tailored to the exact application specifications, it has already been vetted to produce metal stampings for defined applications.
- **Deep Drawn Stamping:** Deep drawn stamping operations produce components with depths that exceed their diameters.
- **Shallow Drawn Stamping:** Shallow drawn stamping operations produce components with diameters greater than their depths.

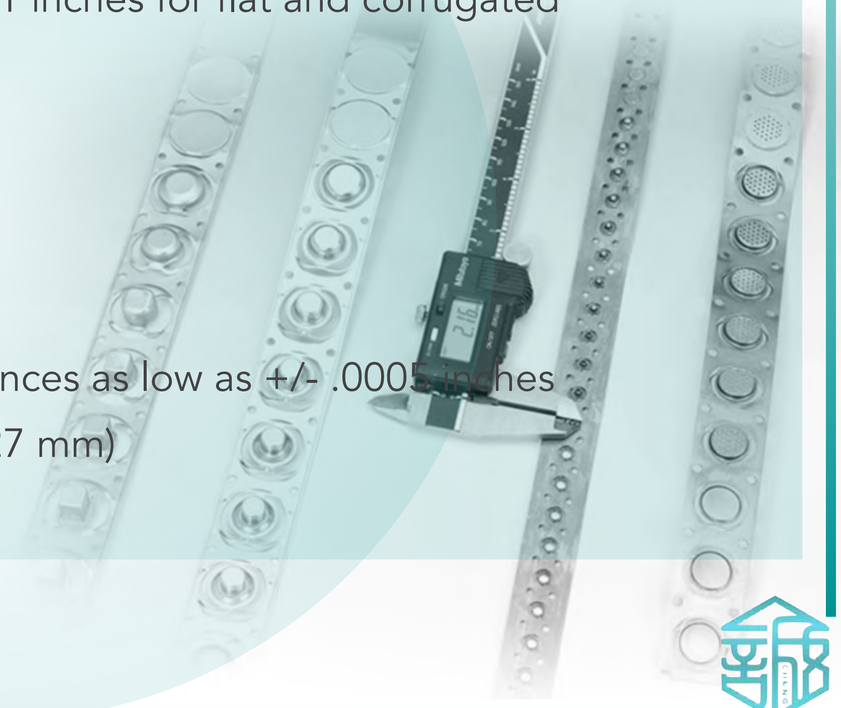


JCL | Deep Drawn Stamping Capability

We can accommodate stamping requests for various shapes, sizes, tolerances, and volumes.

Our part and production capabilities include:

- **Size**: 1/8 inch to 12 inches (3.1 mm to 305 mm) in diameter and 12 inches (305 mm) in length; .200 inches to 18 inches in diameter for flat and corrugated metal diaphragms
- **Thickness**: .002 inches to .187 inches (.005 mm to 4.75 mm); .0005 inches to .001 inches for flat and corrugated metal diaphragms
- **Shape**: Round, square, rectangular, and asymmetrical shapes
- **Precision**: Tolerances as low as +/- .002 inches (.05 mm) on custom cases; Tolerances as low as +/- .0005 inches (.0127 mm) on precision headers; Drawn corner radii as small as .005 inches (0.127 mm)
- **Volume**: Single prototype to 5,000,000 pieces



JCL | Tooling Capability

We utilize a variety of tooling for these stamping operations, such as:

- **Stage Tooling**: Stage tooling consists of multiple tools that need to be switched out in the stamping press between operations.
- **Progressive Die Tooling**: Progressive die tooling has all of the tools necessary for part production combined together into a single die set. The tooling does not need to be switched out between operations, suitable for high-volume production.
- **Transfer Tooling**: Transfer tooling separates the part from the workpiece during the first operation and, using an automated transfer mechanism, moves it through the various forming operations.

Tooling Type

模具名称 *Process Name*	STAGE TOOLING	PROGRESSIVE DIE TOOLING	TRANSFER PRESS TOOLING
工艺类型 *Process Type*	Line	Automated	Automated
适合生产量 *Production Volume*	While stage tooling is ideal for smaller, low-volume <50k pcs per year runs Slow-Medium	Progressive die tooling is designed for high volume production runs, typically >50k pcs per year Medium-Fast	Good for high volume production runs, typically >50k pcs per year Medium-Fast
成本组成 *Cost Structure*	Tooling Setup Cost: LOW Per-Piece Cost: HIGH	Tooling Setup Cost: HIGH Per-Piece Cost: LOW	Tooling Setup Cost: HIGH Per-Piece Cost: LOW

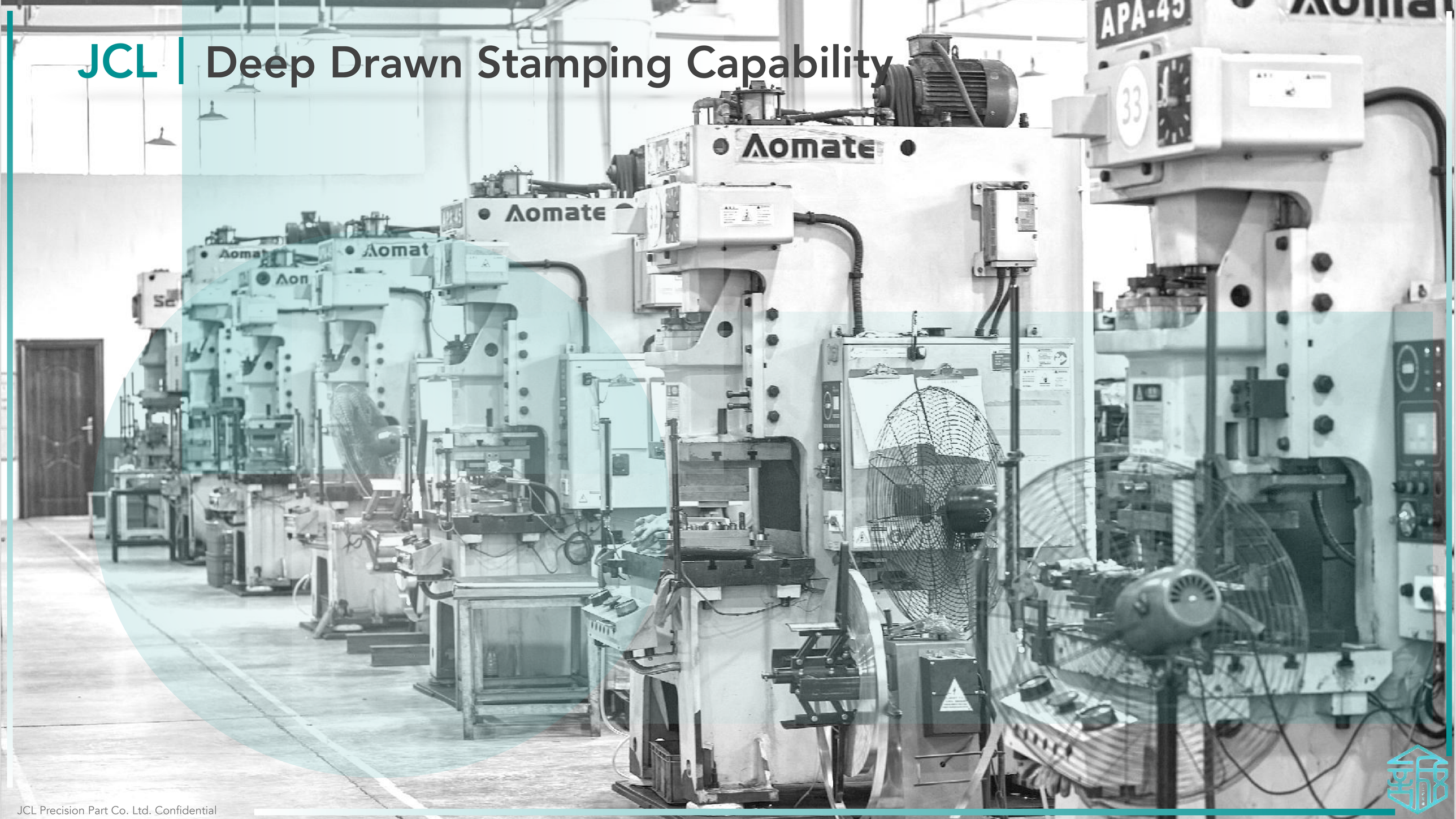
JCL Precision Part Co. Ltd. Confidential

JCL | Tooling Capability

Equipped with a wide range of top-quality machinery, our tool room allows the team to provide reliable services that support our deep-drawn metal forming processes. Some of our tool room equipment includes:

Surface grinders	10 Sets	Kent KGS-3060AHD WANGQIN HF618
Bridgeport milling machines	6 Sets	KAIJUN KJ-618
Wire EDM (electrical discharge machines)	8 Sets	SEIBU C7S/A500 SODICK AQ550/AW350/AQ325
Wire EDM (electrical discharge machines)	8 Sets	DK7740 S530
Ultrasonic Cleaning	2 Sets	QIANFAN 1600

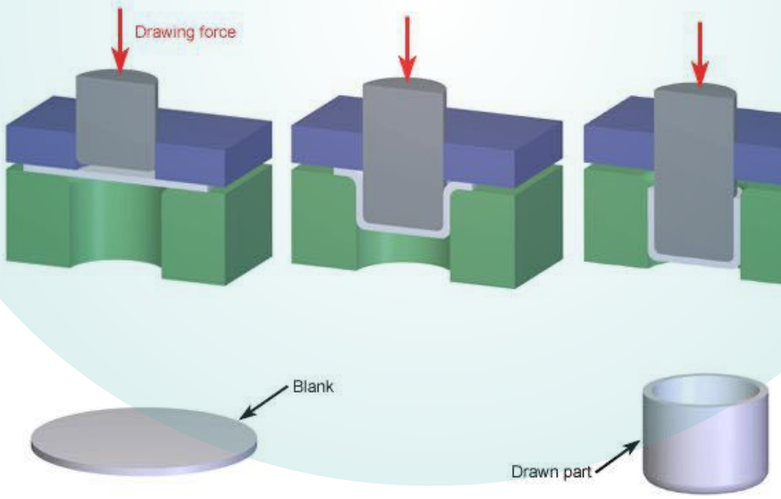
JCL | Deep Drawn Stamping Capability

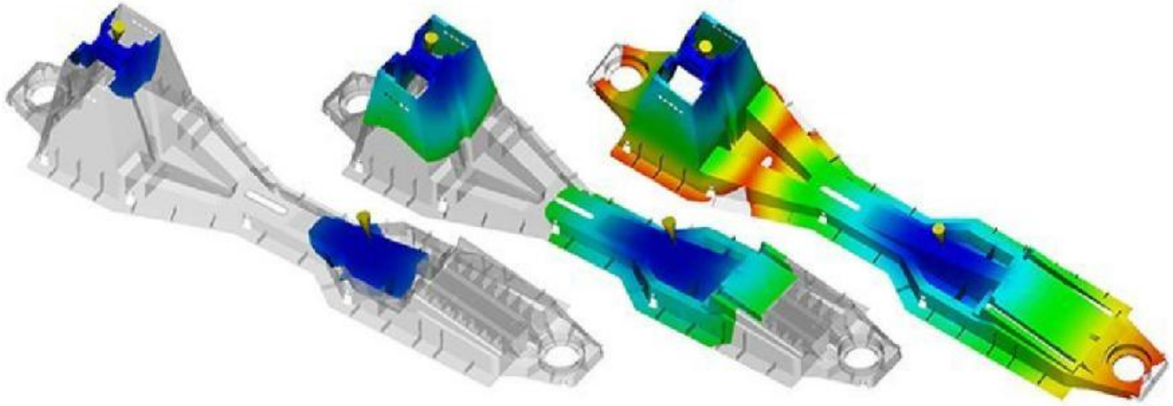


JCL | Custom Component Design Process

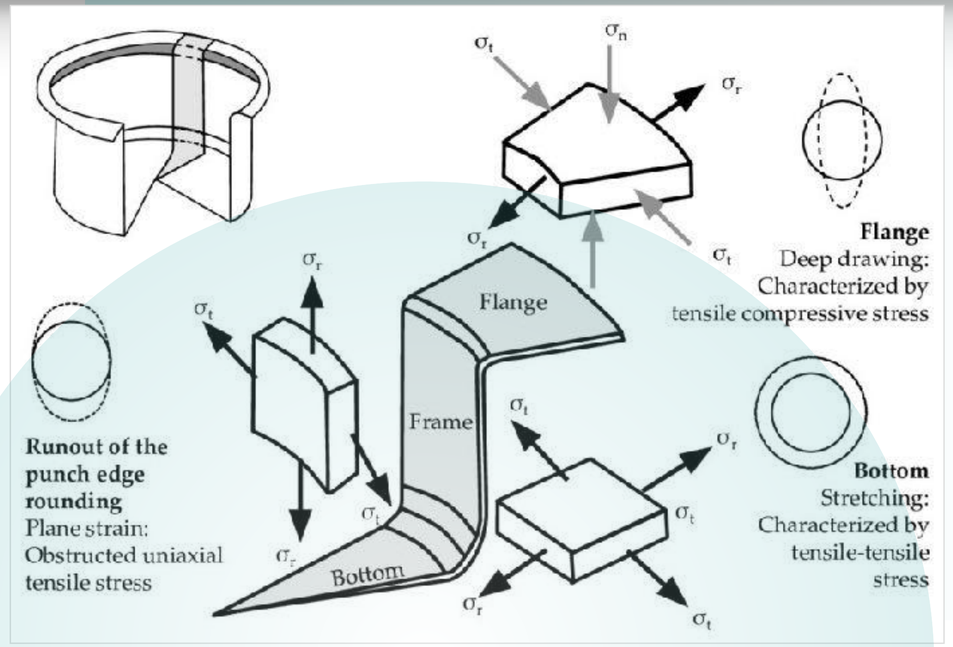
We employ a variety of design technologies and techniques to assist our customers in making a component that fully meets all of their specifications and standards, such as:

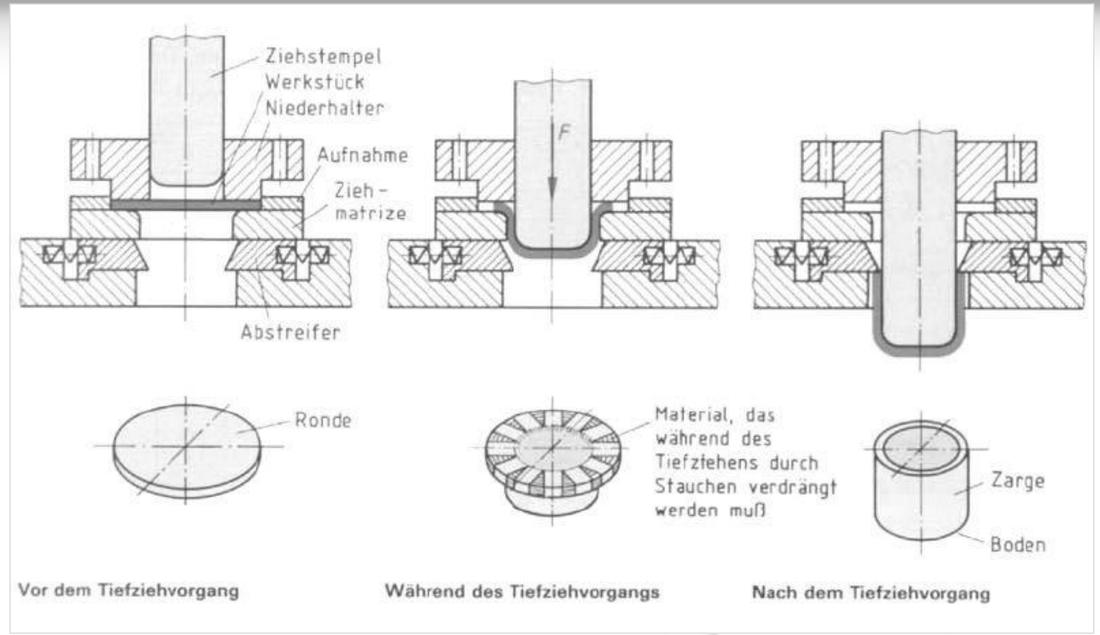
- CAD/CAM Software
- SolidWorks
- Finite element analysis (FEA)
- PAM-STAMP
- COMSOL Multiphysics®





JCL | Custom Component Design Process





Push the envelope. Follow unfamiliar paths. Dare to try new things.

During the deep drawing process, different stress conditions result in the material.

- The zones of interest are the flange, the side wall (cup wall), and its bottom. The stress condition in the flange area is a tensile load in radial direction and compression load in tangential direction.
- The important stress condition in the cup wall is the point of transition of the punch radius to the cup wall area. This loading zone is characterized by a plane strain load, whereas the cup bottom has a biaxial stress load.
- The cup bottom and its biaxial stress load determine the stretch forming process.

JCL Precision Part Co. Ltd. Confidential

JCL | Custom Stamping Equipment

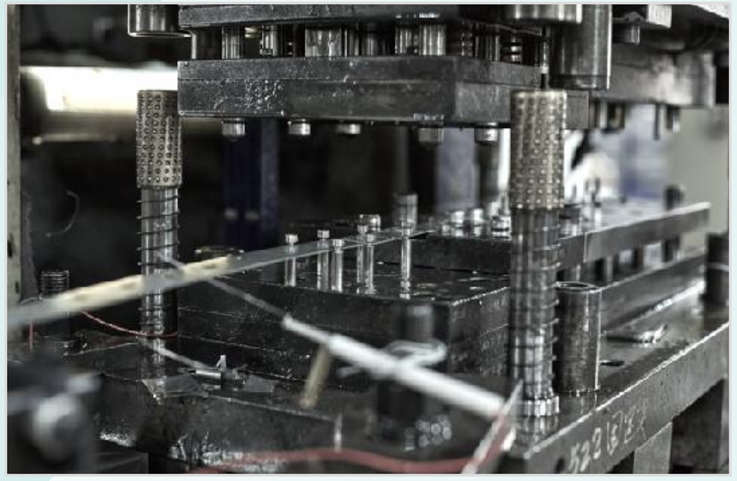
The presses we use for stamping operations include:

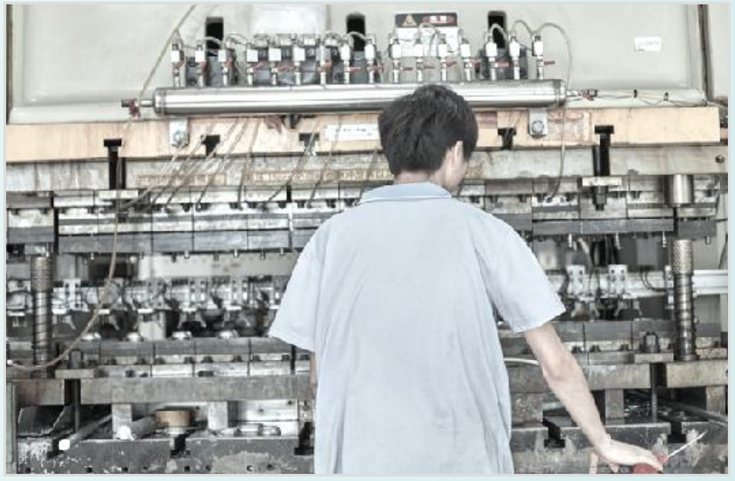
- Open back, inclined (OBI) presses — 22 to 110 ton capacities
- Mechanical, double-action deep drawing presses — 22 to 200 ton capacities
- Hydraulic presses for metal diaphragms and deep drawing — 3 to 500 ton capacities
- 13 - station transfer press — 130 ton capacities

JCL | Custom Stamping Equipment

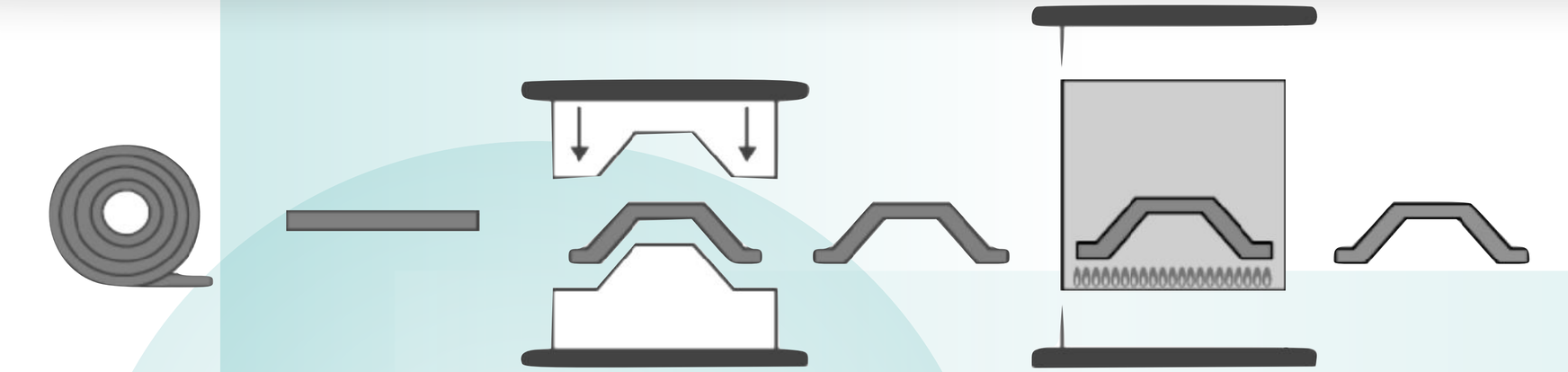
The presses we use for stamping operations include:

- Transfer eyelet press — 20 ton capacities
- Straight side progressive presses — 60 to 500 ton capacities
- Hydraulic, double - action mechanical, open back inclinable, pneumatic, servo (with CNC cushion), and transfer deep drawing presses —1 to 500 ton capacities

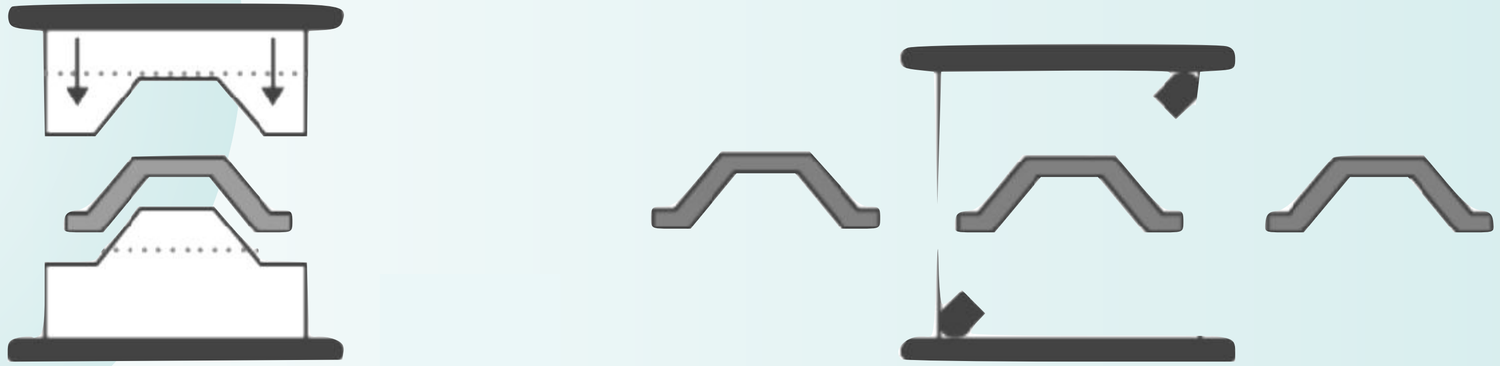




JCL | Deep Drawing Stamping Capability



Sheet Stock → Blanking → Cold Stamping → Transfer → Forming → Transfer



Trimming → Transfer → Surface cleaning → Final part

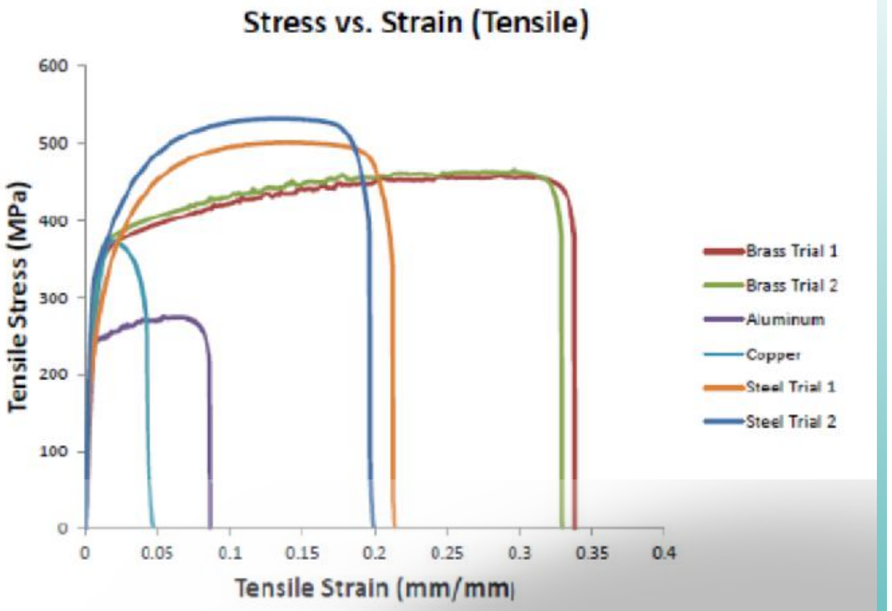
JCL | Heat Treatment

Heat treatment defines processes that specifically change the properties of materials by means of controlled heating and cooling!

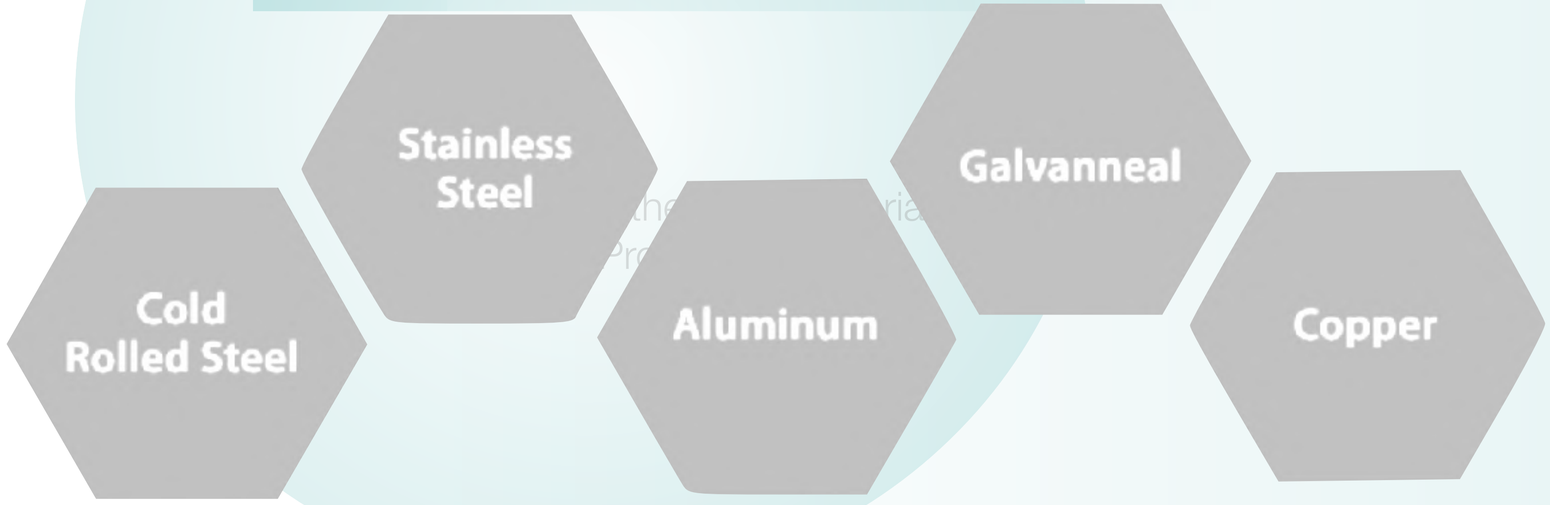
JCL | Raw Materials

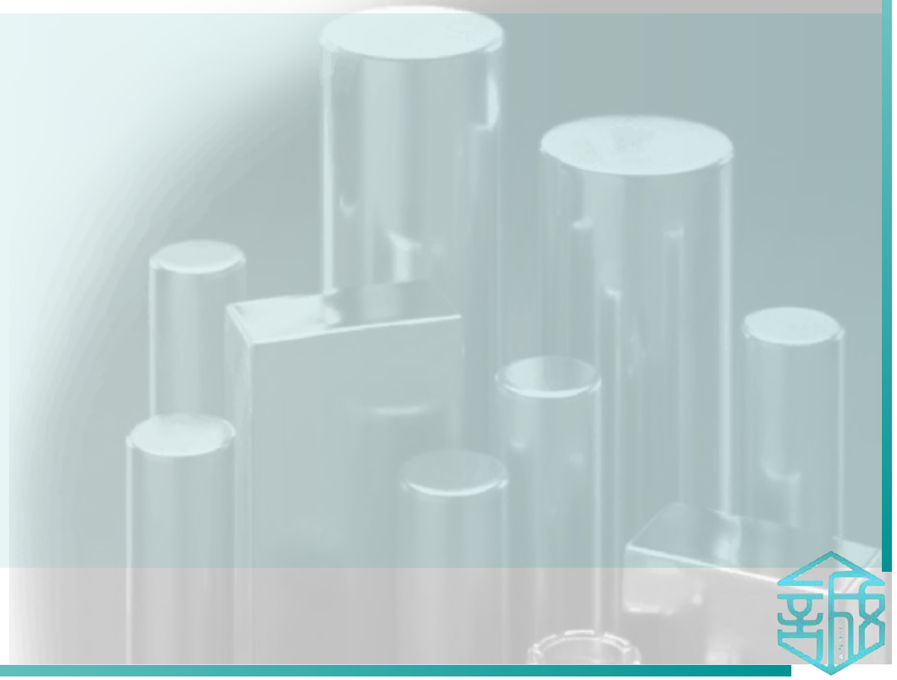
We can source and work with a variety of metals and metal alloys to create finished deep drawn parts, Some of the materials we typically employ include:

- Aluminum
- Brass
- Copper
- Titanium
- Steel and Steel alloys, including aluminized steel, cold rolled steel and stainless steel
- Nickel and nickel alloys



Choosing the Right Material for Your Project



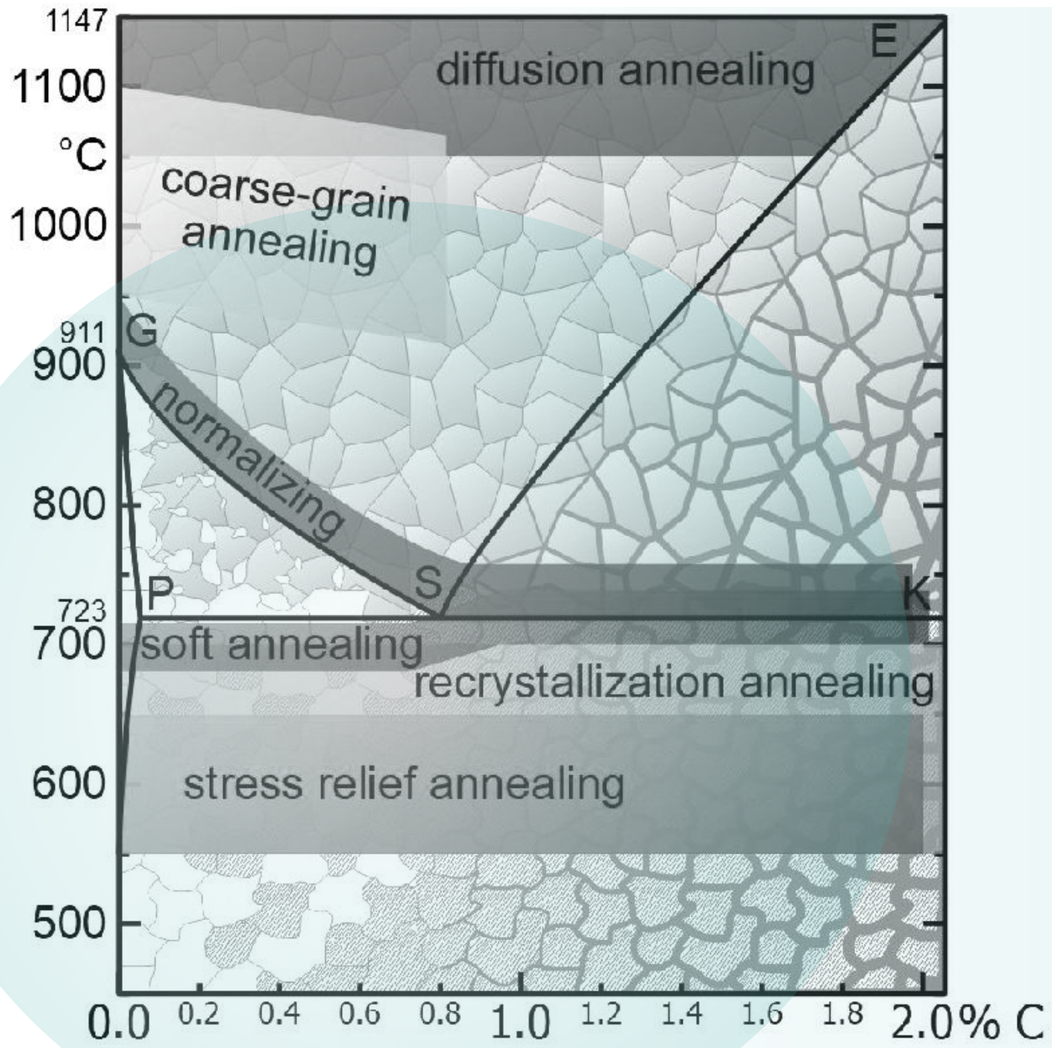


JCL | Heat Treatment

From wear resistance to material adjustment for follow-up processes.

Parts made of metal have a strength gradient, and this must always be taken into account in developing a component. In many situations, we make use of a subsequent heat treatment process to improve the properties after production. We have the necessary expertise and facilities for numerous processes, and in special cases rely on long-standing partners from our network.

JCL | Heat Treatment



Aim	Heat Treatment
Better Formability	Soft Annealing
Better Machinability	Coarse Grain Annealing Soft Annealing
Homogenization of alloying elements	Diffusion Annealing Solution Annealing
Adjustment of grain size	Recrystallization Annealing Coarse Grain Annealing Normalizing
Reduction of residual stresses	Stress Relieving Annealing
Controlling of strength	Quenching / Tempering Soft Annealing Normalizing
Increasing hardness	Hardening

JCL Precision Part Co. Ltd. Confidential

JCL | Variation in Stamping World

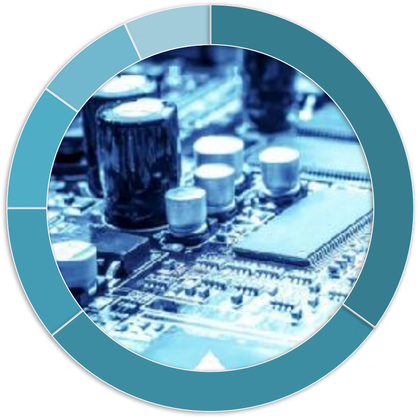
JCL | Application Industries

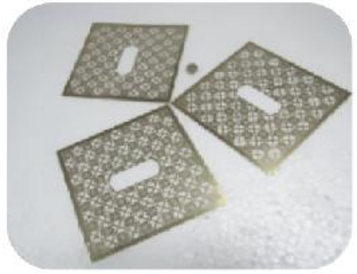
E-Mobility

Mechanical Hardware

Automobile

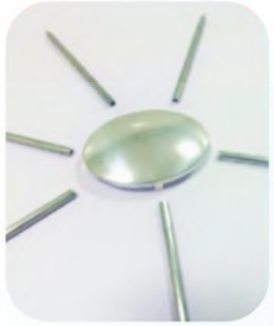
Medical

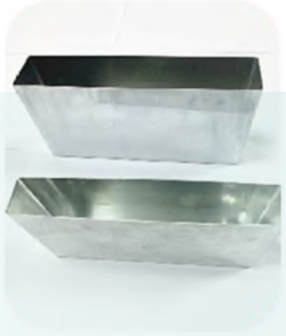


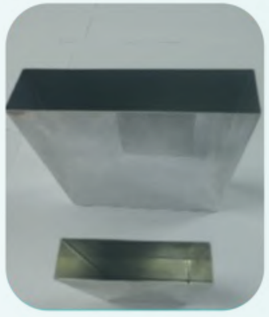


Electronics

JCL | Application Samples







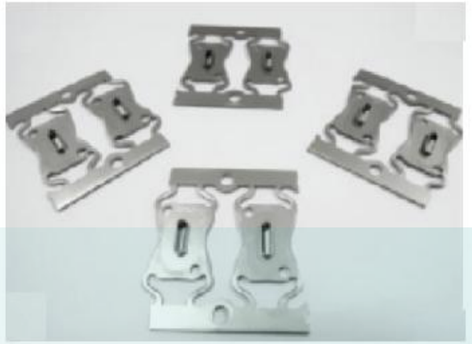
E-Cigarette Enclosure & Parts

JCL Precision Part Co. Ltd. Confidential

JCL | Application Samples

Power Supply

PC Accessories



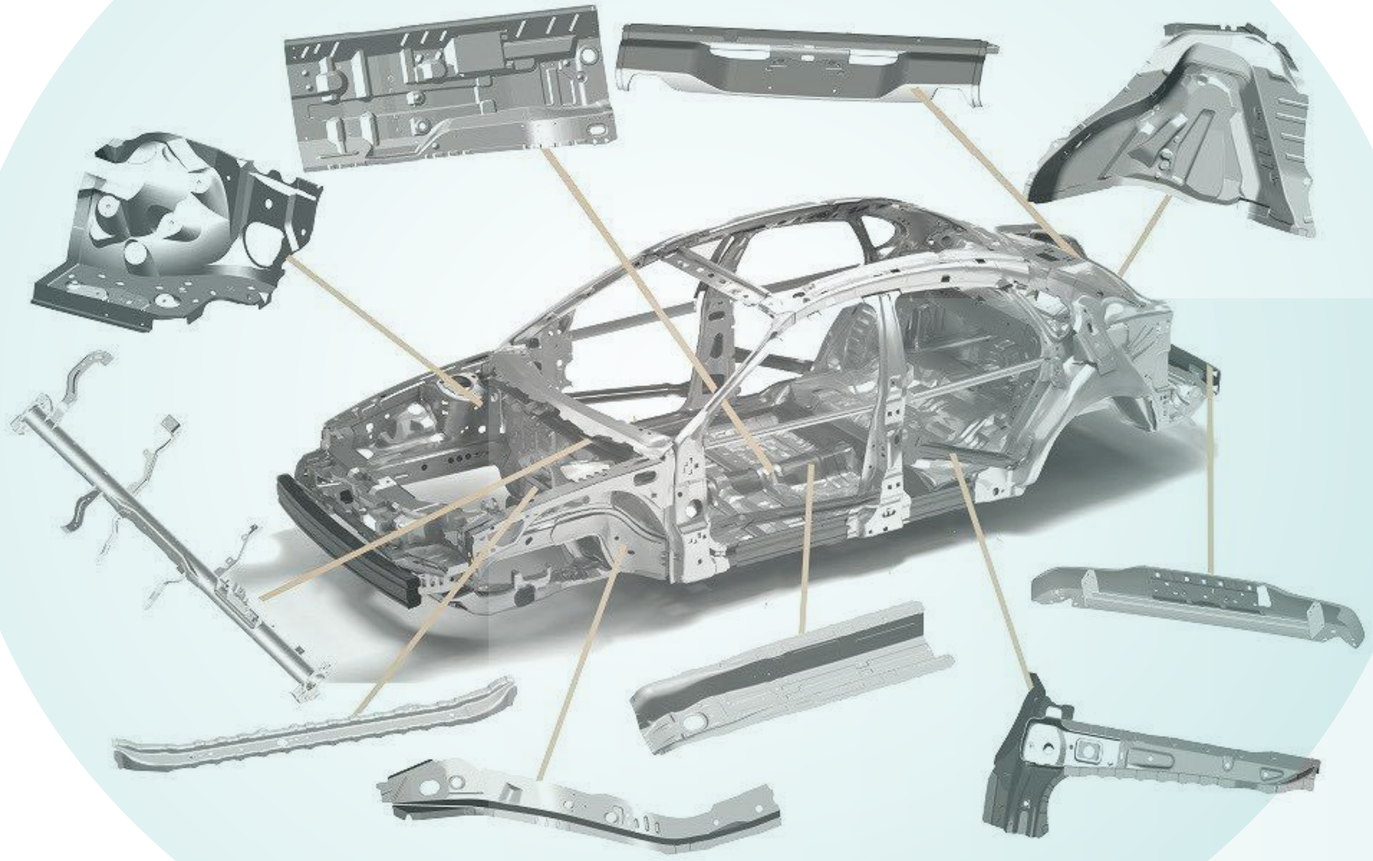
Mobile Phone Accessories

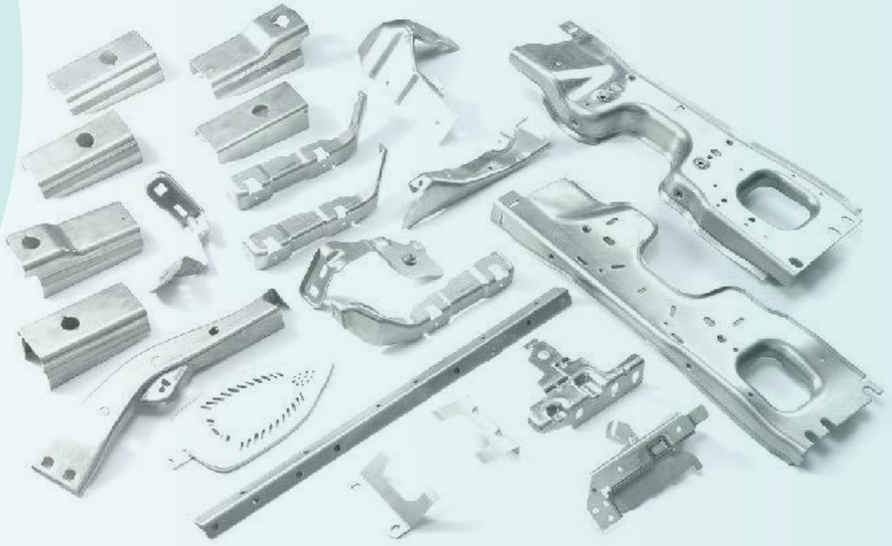
Telecom Accessories

Home Appliance Accessories

JCL | Application Samples

Automobile Assembly Part

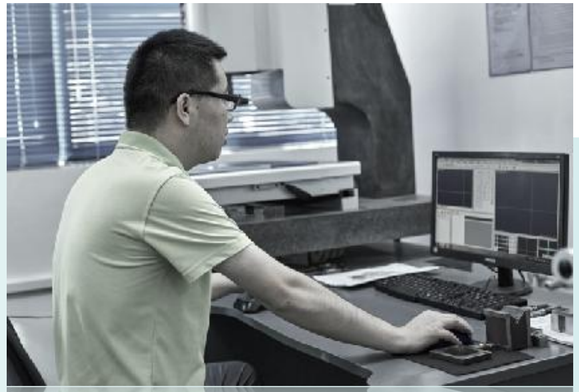




JCL | Quality & Inspection

All of the products we produce are subject to our stringent quality control program to verify their compliance with pre-established requirements and restrictions. The equipment we use for these inspection operations include:

- Optical measuring systems
- Coordinate measuring machines (CMMs)
- Statistical process control (SPC) data collection system
- Minitab software
- Microstructure preparation and examination systems
- In-line automatic optical inspection systems



JCL | Quality & Inspection

Material Quality Control

- 来料检测 Incoming Material Inspection
- 供应商审核 Vendor Auditting
- 品质技术支持Quality Issue Support
- 供应链管理 Supplier Management

In-Process Quality Control

- 制程品质管控 In-Process Quality Control
- 制程问题处理 In-Process Quality Issue Tackling
- 持续优化 Continuous Improvement
- 返工管控 Rework Control

Outgoing Quality Control

- 出货品质管控 Outgoing Quality Control
- 出货问题处理 Outgoing Quality Issue Tackling
- 失效分析与改善措施 Failure Analysis Corrective Action
- 客户沟通 Customer Communication

Reliability / Functional Quality Control

- 外观检测 Cosmetic Inspection
- 测量系统确认 Measurement System Assurance
- 环境测试 Environmental Test
- 数据分析与统计 Data Analysis and Statistical

JCL Precision Part Co. Ltd. Confidential

JCL | Quality Certification

ISO9001

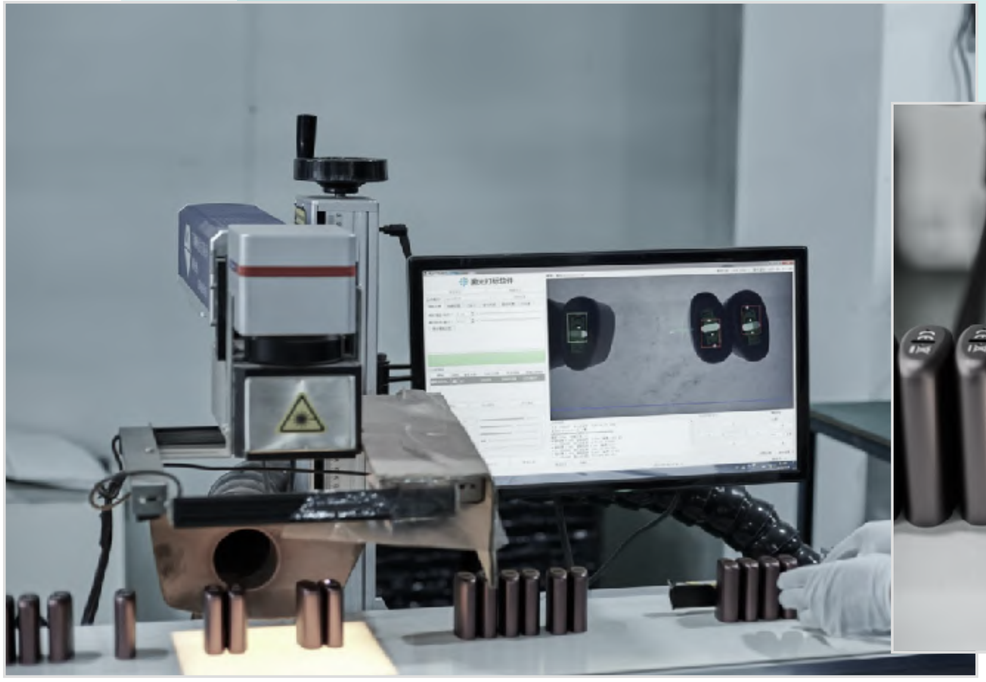
Download Now

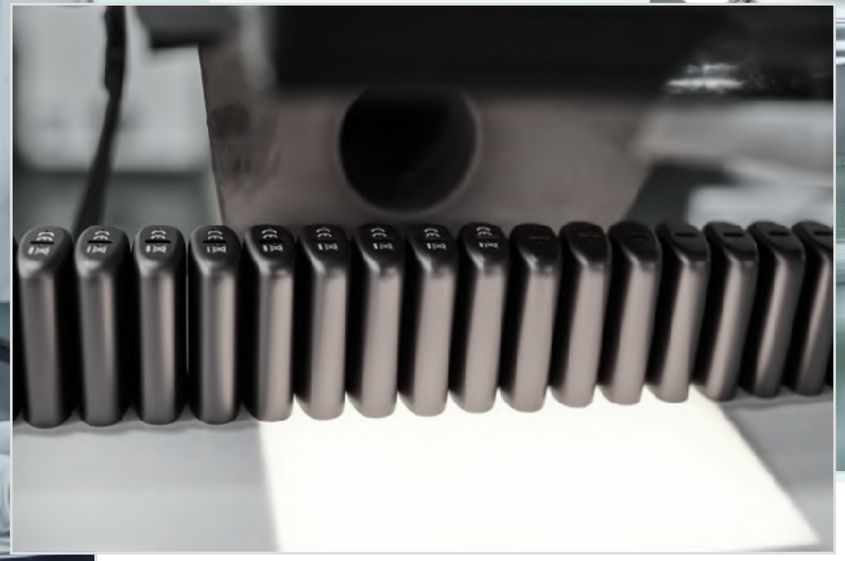
TS16949 in process

JCL | Value Added Service

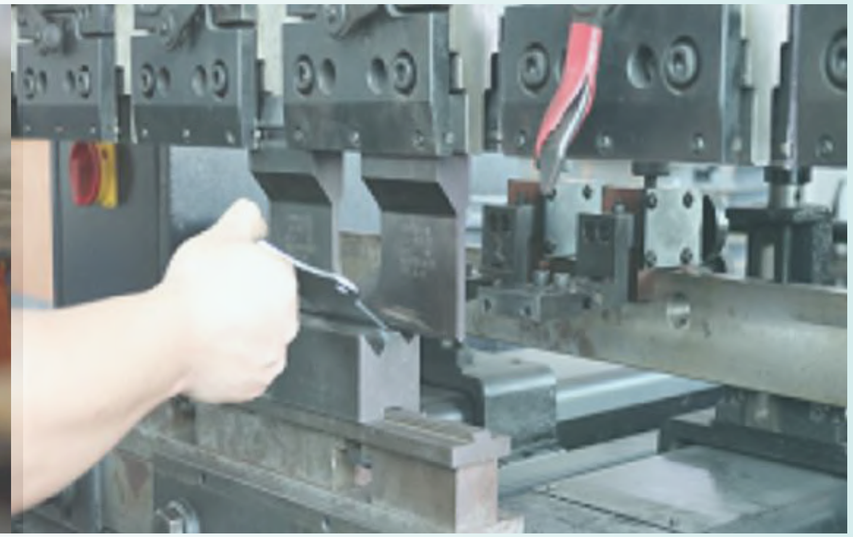
The team is committed to providing all customers with complete customization capabilities so they can tailor their components to meet the specific demands of their applications. In addition to over 100 stamping presses and various tool room machines, our state-of-the-art manufacturing facility houses the following equipment:

- 5-axis laser
- Trimmers
- Lathes/spinner
- Spot welders
- Robotic finishing machine
- Cleaning and edge-smoothing
- Vibratory tumblers
- Surface treatment
- Welding
- Assembly



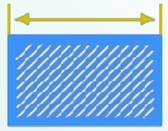


JCL | Sheet Metal Fabrication

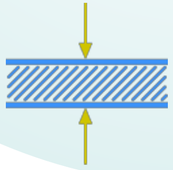


Laser cutting

High-intensity laser cuts sheet metal from 0.5 mm to 20 mm thick to produce high-quality sample sheets for a variety of parts.



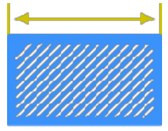
Maximum cutting area
6500 X 2500mm



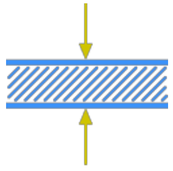
Maximum material thickness
30mm

Plasma cutting

CNC plasma cutting is widely used in custom sheet metal services, especially suitable for thicker sheet metal custom cutting.



Maximum cutting area
8000 X 3000mm



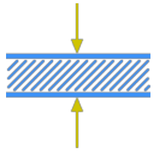
Maximum material thickness
100mm

CNC bending

Sheet metal bending is used to shape steel, stainless steel, aluminum parts and custom sheet metal samples after the cutting process.

Metal Folding Capacity: 1000Tons

Maximum bending length：7200mm



Maximum material thickness：60mm

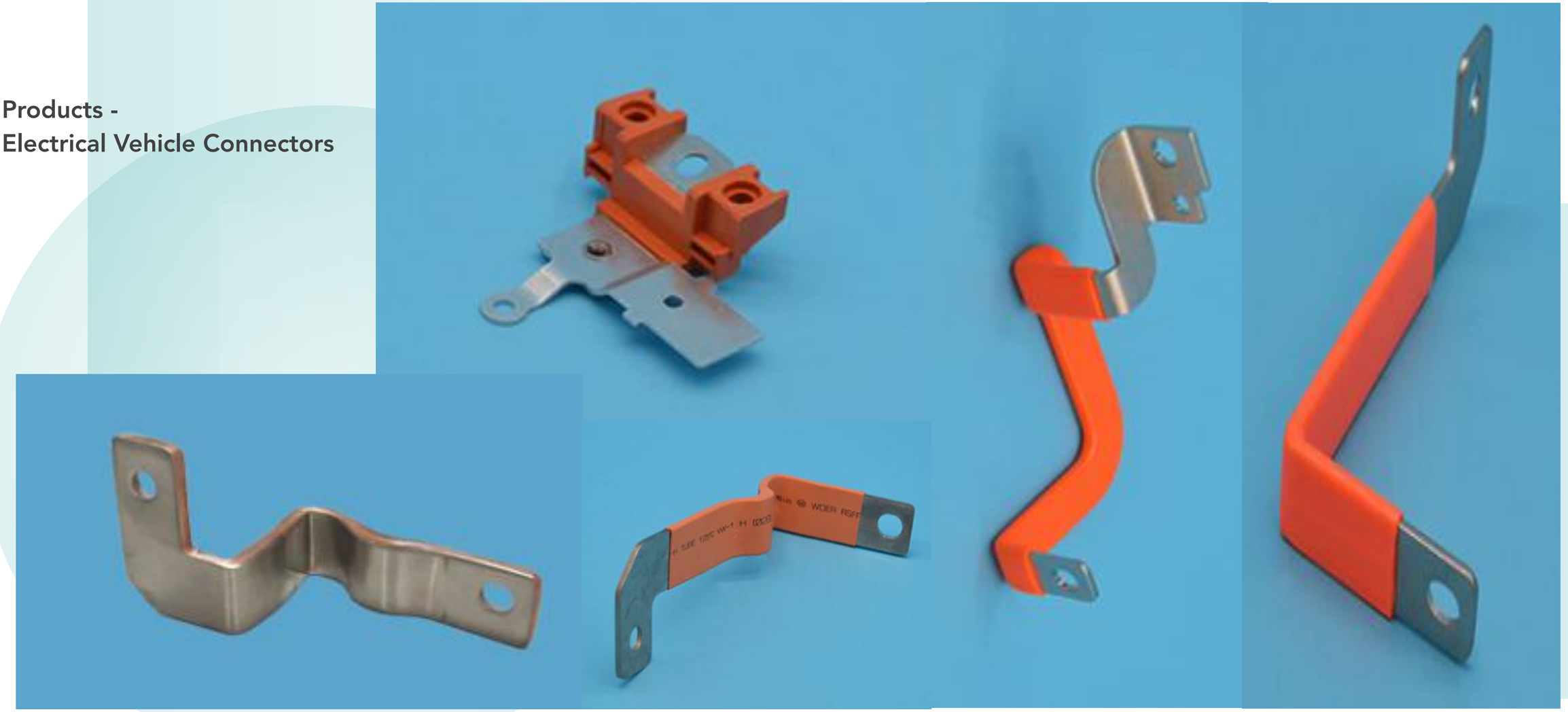
JCL | Sheet Metal Fabrication

Process	Types	XYZ Operation Area	Working Precision / Repeatability (mm)	Axis	Model	Sets
Punch Laser	CO2 Punch Laser	79" X 50" X 0.25"	±0.0027	3	Amada (1/2)	1
Punch Laser	CO2 Punch Laser	79" X 50" X 0.25"	±0.0027	3	Amada (2/2)	2
Punch Laser	CO2 Punch Laser	61" X 99" X 11.8"	±0.0004" / 20"	3	Amada	1
Bending	Bending Machine	61" X 0.1345" Roll Length & Dia.: 4-3/4" Fix Adjustment: Standard	±0.01mm	-	Rogos MGII8025	5
Laser Cutting	1500W Laser Cutting Machine	24" x 18" X 8.5"	±0.0002	3	Quick Laser	3
Laser Cutting	3000W Laser Cutting Machine	24" x 18" X 8.5"	±0.0002	3	Quick Laser	2

JCL Precision Part Co. Ltd. Confidential

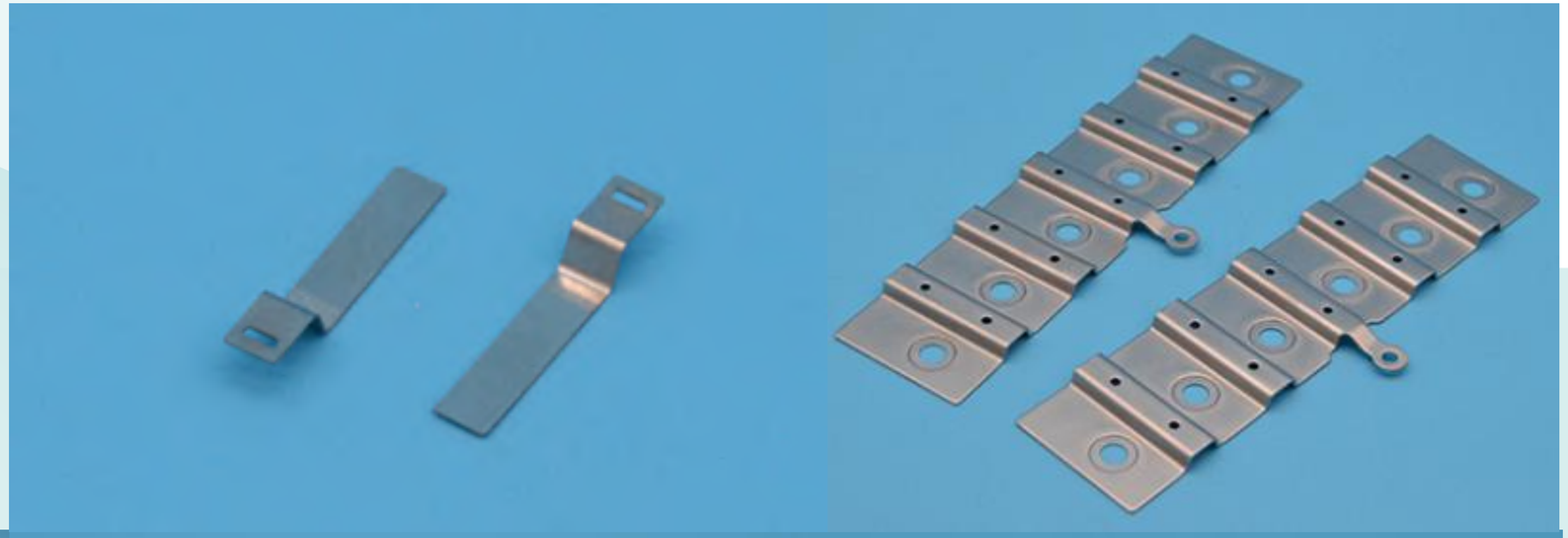
JCL | Sheet Metal Fabrication

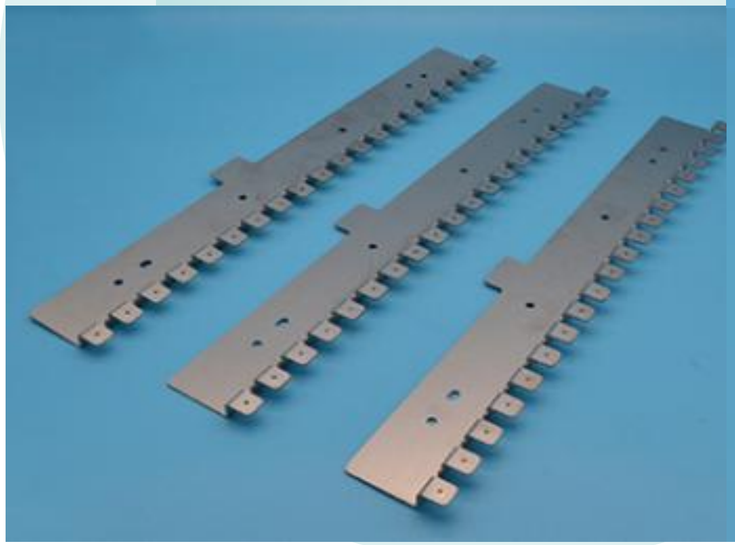
Products -
Electrical Vehicle Connectors

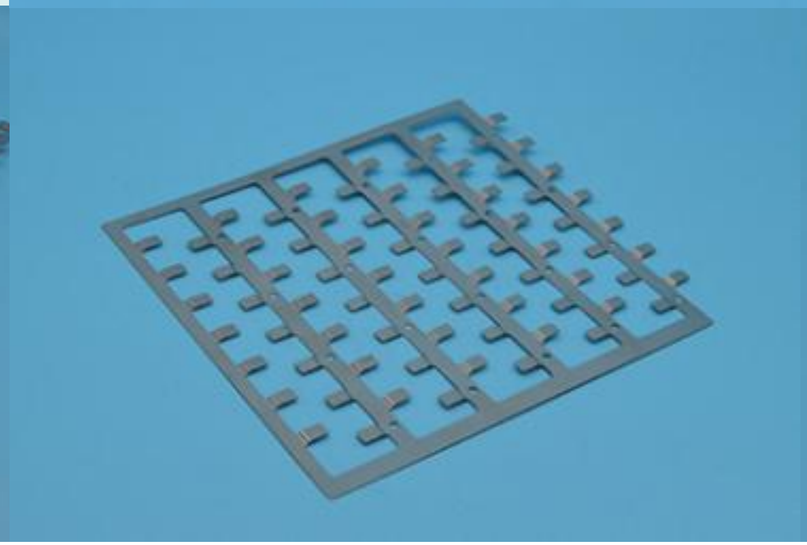


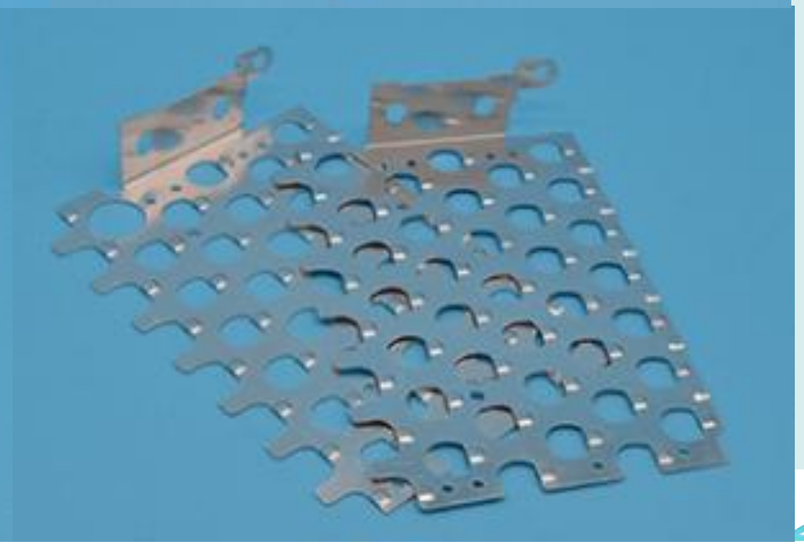
JCL | Sheet Metal Fabrication

Product -
Sheet Metal Laser Cutting &
Bending Parts









JCL | Sheet Metal Fabrication

Product - Sheet Metal Enclosures

JCL | Team Building

The company has more than 70 employees, including tool design engineers and mold technicians with rich practical experience. The company has high-quality management and business team.

With unremitting efforts over 10 years, JCL keep upgrading technology and quality, perfect management system and optimize management system. In the rapid development, our company built up good trust credit in the industry and established a mature business network.

"Forged meaning, build identity"

Mr. TK
CEO of JCL Precision

JCL Engineering Team

JCL Production Team

Thank You!

JCL Precision Part Co. Ltd

Add: Building A, No. 2 Shiquanling Road, Zhenjiang Sub-district,
HZZK Hi-tech Industrial Development Zone, Huizhou

Home: www.jcldd.com

Tel: +86-13809633458, +86-13510277150, +86-0752-3161136

JCL Precision Part Co. Ltd. Confidential