





### **Overview**

All of our suppliers are ISO9001 certified, professional engineering support is available on every stage from drawing design, drawing analysis and mold design to quality assurance. Our suppliers provide service on optimizing initial design, analyzing budget scheme, give suggestions on how to save cost and time. Both OEM and ODM services are provided.

#### Mold design tools

Our suppliers provide complete mold tool design solution with extensive range of CAD interfaces: CAD/CAM, CATIA V5, UG, PRO-E, as well as Finite element analysis (FEA) and Flow3D (mold flow simulating).

#### **Inspection equipment**

Due to the various issues that the casting, forging or machining processes are prone to, our supplier's quality control efforts are always tailored to the needs of individual products. All of our factories use professional inspection equipment, such as spectrometric analyzer, coordinate measuring machine, X-ray, salt spray etc, and can perform various material capability tests, such as: tensile strength, compression, coefficient of friction, tear and crush resistance, deformation strength etc. depending on customer requirements and parts application.

#### **Surface treatment**

To provide improved surface properties of a component our suppliers can offer different types of surface treatment, such as: zinc plating, chrome plating, powder coating, anodizing, cataphoresis (E-coating), Teflon, tumbling (vibration) etc.

#### **Applications**

Different casting, forging and machining methods and materials are available to suit a wide range of applications: transport, heavy equipment, household, hardware, electrical equipment machines, machine tools, art objects etc.

# Technology consultancy in the processes

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- Die casting
- Sand casting
- Lost wax
- Forging
- Machining
- Plastic injection molding

# Experimental research and development

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- Feasibility studies
- Process and technology development
- Casting of prototypes and functional specimens right up to the pre-production series
- Fault and process analysis
- Numerical simulation

### Quality testing and analysis

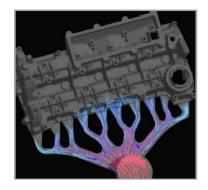
- X-ray testing
- Alloy analysis
- Material testing

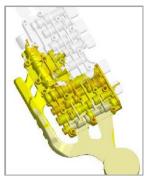
### Consulting

Project support and consultancy

## **Mold Design Tools**

- > CAD/CAM
- > CATIA V5
- ▶ UG
- ▶ PRO-E
- > FEM (Finite Element Method)
- Flow3D (Mold Flow Simulating)





# **Mold Service Equipment**

- ➤ MCRBII
- > CNC machining Center
- Caved machine
- > KKO, EMD machine
- Grinder
- > CNC milling etc.



# **Inspection Equipment**

Coordinate measuring machine and spectrometric analyzer



**Hardness** 



**CMM** 



**Tensile Tester** 



**Spectrometer** 



Salt Spray



X-RAY

# **Die Casting Parts**

Materials available: Aluminum Alloy, Zamak



#### You can achieve:

- Low incremental cost per item
- Good surface finish
- Dimensional consistency
- Reduction or elimination of secondary machining operations
- Rapid production rates

## **Sand Casting Parts**

Materials available: Aluminum Alloy, Iron, Brass



#### You can achieve:

- Low tooling costs
- Low and medium quantities suitability
- Complex shapes and large components casting
- Alloys diversity

## **Lost Wax Casting Parts**

Materials available: Stainless Steel, Brass, Carbon Steel



#### You can achieve:

- Reduction of material costs
- Weight reduction
- Design and detail flexibility
- No flash or parting lines
- Great surface finish and close tolerance

# **Forging Parts**

Materials available: Aluminum, Steel, Brass



#### You can achieve:

- Better mechanical properties
- Metal structure refining
- Elimination of porosity
- Minimum weight

## **Machining Parts**



#### You can achieve:

- High accuracy
- Smooth surface finishing
- Variety of work materials
- Special geometry features

   (accurate round holes, screw threads, very straight edges and surfaces)

# **Plastic Injection Molding Parts**



#### You can achieve:

- Complex products in different shapes and design
- High production output
- Ability to include inserts
- Good color control

