Prototyping with Quality and Commitment

Prototyping is an iterative process that is part of the analysis phase of the systems development life cycle. Ideas can be developed to fully functional prototypes and through to production. Dedicated engineers manage every stage of project development resulting in reduced lead times and greater cost efficiency. We can model with a wide variety of materials including many sorts of plastics such as ABS, MABS, PMMA, PVC, PC, POM, PP, PA, PPT, PE, etc. of course the same is true for many metals including stainless steel, aluminum and copper. Through comprehensive examination and extensive testing we can meet our customer’s requirements for new product appearance, enhanced performance and robust configurations, offering quality products, which helps to shorten the development cycles and reduce the risk of tooling rework and increase the product quality.

Productivity is the result of commitment to excellence, intelligent planning and focused efforts.

Hongyi JIG Rapid Technologies Co. Ltd. (HJIG) is a combined endeavor of HONGYI (China) and JIG (Jagdeep Industrial Graphics, INDIA) to facilitate and improvise the product development companies by using advanced technologies. Hongyi JIG has exhibited extraordinary services in industrial product designing and development by manufacturing and delivering quality products. We have a specialized team of dedicated product designers to take care of product development life cycle ensuring the specific results of research and development to end product quality. Combined collaboration of China and India to deliver high-class quality by using sophisticated technology. We, one of the world’s leading product design companies delivering seamless transitions from design to product, has been focusing on one-stop services ranging from design research, strategy, innovation, product design, engineering and production management. By thoroughly researching markets and users, identifying emerging market opportunities, and defining design breakthroughs, we deliver user-centered solutions with a combination of aesthetic appeal and user experience, helping our clients to build brand and customer value.
**PROCESS**

Prototyping with Different Techniques

- CNC WORKSHOP
  - CNC LATHE
  - LAZER ENGRAVING
  - SILICON MOLDING
  - POLISHING & PAINTING

- INFORCEMENT & QUALITY CONTROL
  - Double Molded Prototype
  - Functional Prototype
  - Mockup Prototype

**Techniques Method**

**CNC Machining**
- Machining on block of plastics or wood
- Variety of materials: ferrous and non-ferrous materials
- Functional Clear/Transparent Parts

**Stereo Lithography (SLA)**
- Selective laser curing of photo resins
- Visual samples
- Secondary tooling
  - Investment casting
- Laser Sintering (SLS)
  - Selective Laser Sintering of plastics
  - Functional (SLS) material using a laser beam
- Secondary tooling
  - Investment casting
  - Fused Deposition Modeling (FDM)
- Extruders as per CAD data.
- Secondary tooling
  - ABS material

**Metal Casting**
- Investment Casting, Plaster Casting in Aluminum and Zink
- Functional

**SLS (Selective Laser Sintering)**
- Material used is Nylon, Glass Filled Nylon, Polystyrene.
- Method of Laser Sintering.
- Very good /fine feature definition.
- More economical for multiple components.
- Most useful for functional testing of components.
- RP can be used for rapid tooling processes.

**SLA**
- Material used is Epoxy.
- Method of Laser curing.
- Very good /finish and /fine feature definition.
- Parts are fragile and most useful for visual verification.
- RP can be used for rapid tooling processes.

**Our Infrastructure**

- Our Design & Planning
- Our Prototyping with Variety of Surface Treatments
- Our Prototyping with Understanding your Business

**Our Cases**

- Manual Processing
  - UV Solidifying
  - Vacuum Plating
  - Electroplating
- Manual Processing
  - Body Mock Up
  - IT Products/Projector
  - Automotive Lights, BMW
  - Over Molded two colors
  - Home Appliances
  - Electrical Appliances
  - Car Interiors, BMW
- Medical Equipments
- Rider Accessories

**Design Challenges**

- Our Engineers separate big size parts into several smaller pieces to be individually machined. After machining, the smaller pieces are then assembled into one big size part. This method saves production time, production cost, assists in avoiding deformation, and improves processing precision.

**( Hongyi JIG)**

- Hongyi JIG offers a vast selection of High Grade CNC materials to choose on your projects. Our Engineering Plastics selections include: ABS, PMMA, PC, PP, PE, PA (Nylon / GFN), POM (Acetyl / Delrin), Medium Density PU Modeling Board (Ren Shape / Silica Block), PF (Bakelite), PTFE (Teflon), and PEI (Ultem). Our Engineering Alloy selections include: Aluminum, Magnesium, Zinc, and Brass.

- Polishing on the surface of parts to achieve the brightness, fineness and specific effect. Assembling the parts to make sure that they match.

- Inspect the size, structure, surface etc. of the parts. Control the quality. With the use of Assembly Fixtures and the FARO CMM (Coordinate Measuring Machine) we can accurately assemble big size parts. This method saves production time, production cost, assists in avoiding deformation, and improves processing precision.

- Upon requests, we can carry on small batch production, model appearance after treatment steps, the painting and electroplating samples can be prepared for display and market promotion, enabling our customers to pre-empt the market and reduce the consumption cost of Body Mock Up.