



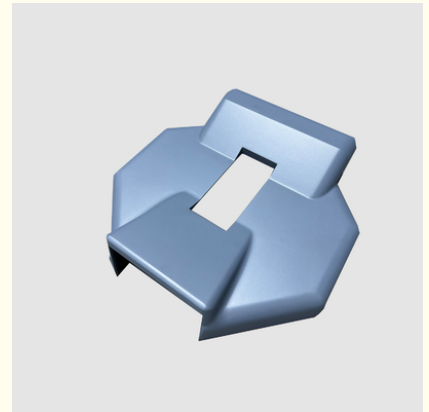
Home Cnc Machining Prototypes Comparing 3D Printing And Vacuum Casting Prototyping

Our Product Introduction

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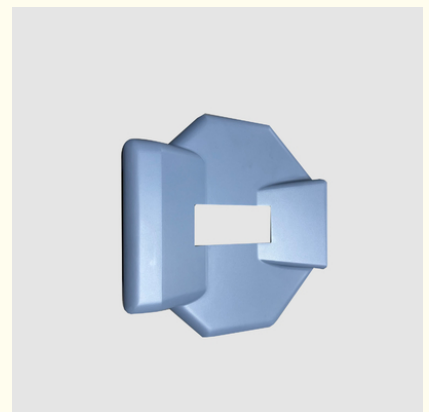
Basic Information

- Place of Origin: China Shenzhen
- Brand Name: Home Appliance Prototype
- Certification: Polishing, Anodizing, Painting, Chrome Plating, Silkscreen
- Model Number: ABS, PC, PMMA, POM, PA, PTFE, PEEK
- Minimum Order Quantity: 1 piece
- Price: USD 50 piece
- Packaging Details: Carton, Plywood Box
- Delivery Time: 3 - 5 Days
- Payment Terms: T/T, Paypal
- Supply Ability: 1 piece per day



Product Specification

- Surface Finish: Anodise, Laser Etching, Brush Etc.
- Surface Treatment: Paint, Mask Paint, Silkscreen
- Included Components: Home Appliance Prototype
- Industry: Automotive, Home Appliance Etc.
- Delivery: Express/air
- Drawing Format: STP, IGS, X-T, DWG, PDF Etc
- Technology Type: Cnc Machining
- Highlight: **home cnc machining prototypes, home vacuum casting prototyping, cnc machining vacuum casting prototyping**

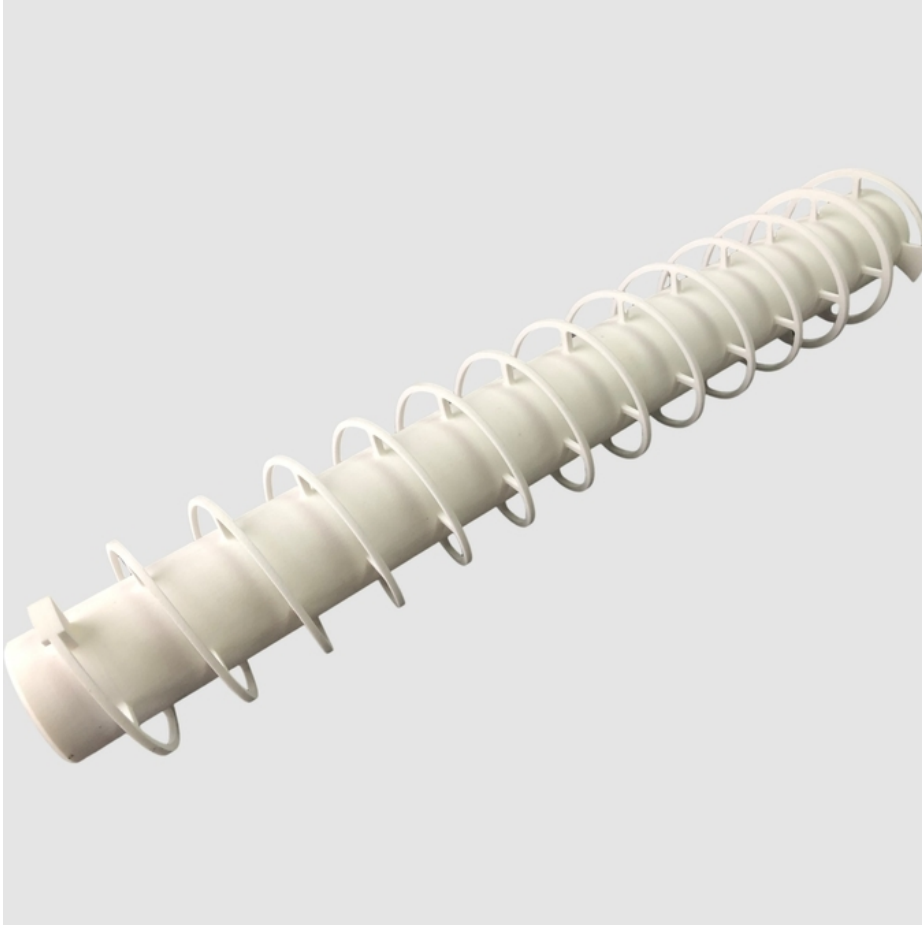


Product Description

Looking for the Best Method to Home Appliance Prototyping

When it comes to home appliance prototyping, there are several methods you can consider based on your specific requirements and resources. Here are some of the commonly used methods for home appliance prototyping:

3D Printing: 3D printing, also known as additive manufacturing, is a popular method for home appliance prototyping. It allows you to quickly create physical prototypes directly from 3D CAD models. 3D printers can produce prototypes with various materials, including plastics, which are commonly used in home appliances. This method is advantageous for its speed, cost-effectiveness, and the ability to create complex geometries.



CNC Machining: CNC machining involves the use of computer-controlled machines to shape and cut materials into the desired form. It is suitable for creating prototypes from a wide range of materials, including metals, plastics, and wood. CNC machining provides high precision, accuracy, and excellent surface finishes. However, it may require more time and cost compared to 3D printing.



Vacuum Casting: Vacuum casting is a technique that duplicates the look and characteristics of the end product by forming a silicone mold from an original model. This mold is subsequently utilized to produce several prototypes with different materials, including polyurethane. It is ideal for fabricating small to medium batches of prototypes, offering high-quality surface finishes and mechanical properties.



Foam Modeling: This process entails sculpting blocks of foam into the desired shape through manual or CNC cutting methods.

Foam prototypes, while not functional, are light and serve as a visual mock-up of the design. They are beneficial for assessing the ergonomics, aesthetics, and general appearance of the product.



Rapid Tooling: Rapid tooling involves the creation of prototype molds or tooling inserts using additive manufacturing or CNC machining. These molds are then used to produce prototype parts using injection molding or other molding techniques. Rapid tooling allows for the production of prototypes that closely resemble the final product in terms of material properties and functionality.



Mock-Up Prototyping: Mock-up prototyping involves creating a non-functional prototype using readily available materials such as foam, cardboard, or wood. It provides a low-cost and quick way to evaluate the size, shape, and overall concept of the home appliance.









The choice of prototyping method depends on factors such as the complexity of the appliance, desired prototype materials, time constraints, budget, and the level of functional representation required. It's often beneficial to combine multiple methods

or iterate through different prototyping stages to achieve the best results.



Assembly and Functional Integration: Assemble the painted components, ensuring that they fit together accurately and function as intended. This includes integrating electrical components, control panels, doors, handles, and other relevant parts. The functionality of the prototype should closely resemble that of the final product to facilitate in-home testing and evaluation.

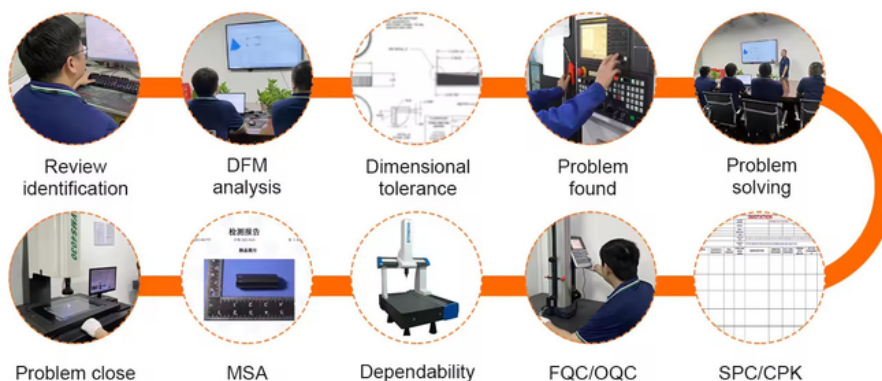
Surface Finishes for Home Appliance Prototype					
CNC machining leaves visible tool marks during the process of removing portions of the block's surface to create desired shapes. If you don't want as-machined parts, select a surface finishing for your custom parts. At Barana Rapid, we offer several common surface finishes that help improve functionality and aesthetics.					
	Name	Description	Materials	Color	Texture
	Anodizing	Anodizing improves corrosion resistance, enhancing wear resistance and hardness, and protecting the metal surface. Widely used in mechanical parts, aircraft, and automobile parts, precision instruments, etc.	Aluminum	Clear, black, grey, red, blue, gold.	Smooth, matte finish
	Sand Blasting	Sand blasting results in parts with a smooth surface with a matte texture. Used mainly for visual applications and can be followed by other surface treatments.	ABS, Aluminum, Brass	N/A	matte
	Powder Coating	Powder coating is a type of coating that is applied as a free-flowing, dry powder. Unlike conventional liquid paint which is delivered via an evaporating solvent, powder coating is typically applied electrostatically and then cured under heat or with ultraviolet light.	Aluminum, Stainless Steel, Steel	Black, any RAL code or Pantone number	Gloss or semi-gloss

	Electroplating	Electroplating can be functional, decorative or corrosion-related. Many industries use the process, including the automotive sector, in which chrome-plating of steel automobile parts is common.	Aluminum, steel, Stainless Steel	N/A	Smooth, Glossy finish
	Polishing	Polishing is the process of creating a smooth and shiny surface, either through physical rubbing of the part or by chemical interference. The process produces a surface with significant specular reflection, but in some materials is able to reduce diffuse reflection.	Aluminum, Brass, Stainless Steel, Steel	N/A	Glossy
	Brushing	Brushing is a surface treatment process in which abrasive belts are used to draw traces on the surface of a material, usually for aesthetic purposes.	ABS, Aluminum, Brass, Stainless Steel, Steel	N/A	Satin

Quality Control and Testing: Conduct thorough quality control checks to ensure the prototype's functionality, safety, and adherence to specifications. Test the appliance for its intended functions, such as heating, cooling, or other relevant features. Evaluate its performance, energy efficiency, and user experience to identify any necessary design refinements.

Our First Article Inspection Process				
When Barana Rapid receives your order requirements, we will carry out the first article inspection service. According to our company's regulations, Barana Rapid will provide the first article inspection service to ensure better completion of your machining project if the order demand reaches 3,000 US dollars or the minimum order quantity is 300 pieces.				
	Step 1	Step 2	Step 3	Step 4
Barana Rapid	Offer first article inspection We offer first article inspection services for batch production.	Draft contract We review the project and contact customers for detailed information.	Produce sample We produce sample parts according to the FAI agreement and deliver them to you.	Full-scale production The full-scale production starts and finishes production within lead time.
Client	Request inspection You request first article inspection for a project that meets our FAI requirements.	Sign contract You sign the FAI agreement provided by us and agree on our Terms and Conditions.	Receive sample You receive and examine the parts, inform us of full-scale production may begin.	Receive products You receive your prototypes or production parts on the required lead time.

Quality Inspection



Packing



Bubble bag



Bubble bags



Cartons



Customized packing
as custom request



Carton



Pallet carton



Wooden case



Shipping



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