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## Copper Alloy Investment Casting

Founded in 2007, SHENGFA Hardware is a well-known copper alloy investment casting manufacturer in Ningbo China who offers a full range of services from innovative design and engineering to sourcing and production using best in class quality control methods at a cost-effective manner. Focus areas include CNC machining, investment castings, and forging. With our diverse capabilities and depth of experience over 15 years, we will help to make your design and concept into reality. Copper alloys are metals that have the predominant component of copper. Copper alloy investment casting is incredibly versatile, so it is used in a large variety of applications, such as plumbing, marine and electrical.

### The History of Investment Casting

Historically, investment casting technology was mainly used for casting: tools, weapons and ornaments. Nowadays this technology is employed in many important manufacturing sectors, both industrial and artistic. Especially copper alloy investment casting, which is perfect choice for electrical connectors, heat exchangers, rivets, fasteners, nuts, bolts, and more.

The propagation of the metal usage skills and cast production is connected with the technology of creating models, moulds and casts. Archaeological studies confirm the knowledge of alloy preparation and the application of advanced methods of mould making. The wax model method, based on melting the wax before the mould is cast, ensures smoothness and precision of the model reproduction as well as thin wall of the cast. Wax model was covered with many layers of clay, dried and fired in the proper temperature to ensure refractoriness and mould durability.

### The Advantages of Copper Alloy Investment Casting

Copper has been mined for thousands of years, dating to prehistoric times. The popularity of this metal is related to its physical properties, mainly its ductility, conductivity and resistance to corrosion. In order to expand on these properties, copper can be alloyed with different materials to create combinations that are capable of being used in a wide range of applications. They are commonly used for plumbing, marine and electrical applications because they provide excellent corrosion resistance, high thermal conductivity and toughness.

Copper alloys have a predominant component of copper and are typically classified as brasses or bronzes. Copper-based investment castings are incredibly versatile, with more than 400 different alloys with different properties. Investment casting is an effective and efficient metal manufacturing



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process because it allows for tight tolerances and is capable of producing intricate cores and passages. Our copper alloy investment casting parts include but not limited to gears, pumps, bearings, marine fittings. Copper alloys are also selected for their various properties that include electrical conductivity, salt water corrosion resistance and aesthetic appearance.

As a one-stop manufacturer and supplier, SHENGFA also provides secondary and support service which include welding, finishing, CNC machining and heat treating to finish a complete product that meets customer's exact requirements.

Contact Us to Learn More About Copper Alloy Investment Casting for Your Application

### Product Parameters

Material	Carbon steel, alloy steel, stainless steel, copper Alloy
Process	Investment (lost wax) casting + CNC machining
Casting dimension tolerance	CT7
Casting surface roughness	Ra 12.5 um
Casting weight range	0.1-90 kg
Casting Size	Max linear size: 1200 mm, Max diameter size: 600 mm
Machining Precision	Positioning accuracy 0.008 mm, Rep. position. accuracy 0.006 mm
Machining surface roughness	Ra0.8 ~ 6.3 um
Max Travel Of Spindle	1900 mm x 850 mm x 700 mm
Max Turning Diameter	830 mm
Material standard	GB, ASTM, AISI, DIN, BS, JIS, NF, AS, AAR
Surface treatment	KTL (E-coating), Zinc plating, Mirror Polishing, Sand Blasting, Acid pickling, black oxide, Painting, Hot galvanizing, Powder coating, Nickel plating.
Service available	OEM & ODM
Quality control	0 defects, 100% inspection before packing
Application	<ul style="list-style-type: none"><li>● Aerospace and defense</li><li>● Power generation</li><li>● Automotive</li><li>● Oil and gas</li></ul>



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