



Alloy Steel Silica Sol Investment Casting Assembly

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Product Description

Made for Strength

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The key to economical use of the investment casting process is to fully utilize its flexibility and dimensional capability by incorporating as much added value into the casting as possible, thus eliminating or minimizing welding or machining to provide a part of high integrity and tighter tolerances.

For example, traditionally machined features such as holes and slots are cast to size and machine quality surface finish of 125 micro inches is standard for the investment casting process.

Carbon Steel

The most common metal used to manufacture products, carbon steel is also known as plain steel because it is mainly carbon with no minimum percentage of other alloying elements. Increased carbon content makes the steel harder and stronger through applications of heat treatments, but it also makes it less ductile and lowers the melting point of the alloy.

Of all investment castings manufactured at Barron Industries' investment casting foundry, approximately 30% are made of carbon steel. These precision machined castings are used in ground-based military vehicles, "roughneck" equipment for oil and gas exploration, and conveyerized material handling systems.

Low-Alloy Steel

Alloy steels are divided into low-alloy steels and high-alloy steels, with low-alloy steels most commonly used for industrial applications. Steel is deemed to be low-ally when the amount of added alloying material comprises less than 8 percent of the metal's total weight. The additional elements are added to increase hardness and durability. Commonly added elements in low-alloy steel investment castings are chromium, vanadium, nickel and molybdenum. The percent composition of these various alloying elements is based on the intended use of the investment casting. Low-alloy steels gain strength through heat treatment. Barron's low-alloy steel investment castings are also resistant to corrosion and tougher than normal carbon steel. Common uses for alloy steel investment castings include agricultural equipment, defense applications and performance-critical equipment for the oil and gas industry.

OUR SPECIALTY: UNIQUE NEEDS

In the metal casting foundry business since 1923, Barron Industries melts and pours both ferrous and non-ferrous materials. In addition to aluminum, alloy steels and stainless steel, Barron pours all alloys that can be air melted or inert atmosphere melted including 600 series Inconel alloys as well as Hastelloy X and C.

Material:Alloy Steel

Technique:Silica Sol Investment Casting

Gross Weight:0.5KG

Application Area:Automobile

Product Name:Alloy Steel Part

Anti-Rust:with anti-rust water

Heat treatment:As Cast,Is

Fire,Tempering,Annealing,Quenching,Carburizing,Permeability,Thermal

Refining,Hardening are available.



Ningbo Zhiye Mechanical Components Co., Ltd.



Material	Aluminum alloy ADC12, ADC10, A360, A380, A356,A413,B390,EN47100,EN44100
	Magnesium alloy AZ91D, AM60B
	Zinc alloy ZA3#,ZA5#,ZA8#,Zmark3,Zmark5,ZDC3
	Brass:HPb59-1,HPb62-1
Processing Craft	Drawings→ mould making → die casting →rough machining → CNC machining →surface treatment →product checking→ packing →delivery
Tolerance	± 0.02mm
Surface Treatment	Electroplating, Chrome Plating, Zinc Plating, Nickel plating, Electrophoresis, Anodization, Polishing, Powder coating, Sandblasting, Passivation, Spray painting, Etc.
Quality Assurance	ISO9001:2015 Certified, SGS Certification
Inspection	1.Foundry in-house: 100% inspection on critical dimension; 100% on appearance.
	2.Third Party inspection available upon requirement.
Mainly Testing Facility	Three-dimensional measuring instrument (CMM), Salt spray test box, Dynamic balance detector, Pneumatic detection
Quality	Two years

Ningbo Zhiye Mechanical Components Co.,Ltd.

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Guarantee	
Features & Advantage	1.High machining accuracy, the flatness within 0.1mm.
	2.High finish appearance, smooth surface roughness is Ra1.6 after machining.
	3.The machining precision is high and the assembly structure is seamless.
	4.Smooth appearance, corrosion resistance.
	5.Pass Salt Spray Test with 144 Hours.
Standard	1.Aluminum alloy : ISO3522-84, ASTM85-96, ASTM597-98
	2.Magnesium alloy : ISO/DIS16220-1999, ASTM93/B93M-98,JISH2222-1991
	3.Zinc alloy: ISO301-1981, ASTM86-98, ASTM240-98, ASTM327-98

	Sand Casting	Investment Casting (Water Glass)	Investment Casting (Silica Sol)	Shell Moulding Casting	Gravity Die Casting	High-Pressure Die Casting	Lost Foam Casting
Metals	Ferrous and Non-Ferrous	Most Ferrous	Most Ferrous	Most Ferrous	Only Non-Ferrous	Only Non-Ferrous	Most Ferrous
Size of Components	All Sizes	Small and medium	Small	Medium	Medium and big	Small and medium	Medium
Weight of Components (Kg)	1(kg) - Many tonnes	0,25 - 50 (kg)	0,1 - 30 (kg)	1 - 50 (kg)	1 - 100 (kg)	0,2 - 20 (kg)	1 - 200 (kg)
Flexibility of design for conversion from weldments to castings	High	Very Excellent (WELD2CAST most popular method)	Excellent	High	Moderate	Relative high	High
Needs of secondary machining	High	Moderate	Low	Low	Moderate	Very Low	Low
Product	Low	Low	Medium	Medium	Low	Medium	Medium/Hig

manufacture cost							h
Dimension casting tolerance acc. with ISO 8062	CT10 - CT12	CT7 - CT9	CT4 - CT6	CT7 - CT8	CT7 - CT8	CT4 - CT5	CT7 - CT8
Minimum of cast wall thickness	6 - 8 mm	4 - 5 mm	2 mm	5 mm	4 mm	2,5 mm	3 mm
Draft angle need (deg °)	± 2,0 °	± 1,0 °	± 0,5 °	± 1,0 °	± 1,0 °	± 0,5 °	± 1,5 °
Surface finish (Ra) μ	Ra 50 μ	Ra 25 μ	Ra 3,2 μ	Ra 25 μ	Ra 12,5 μ	Ra 3,2 μ	Ra 25 μ
Casting Alloys	Iron, Ductile Iron, ADI - (Austempered ductile iron), Low-Alloy Steel, High-Alloy Steel, Stainless Steel, Aluminium, Copper, Bronze	Low-Alloy Steel, High-Alloy Steel, Stainless Steel, Hastelloy	Low-Alloy Steel, High-Alloy Steel, Stainless Steel, Duplex Stainless Steel, Titanium	Ductile Iron, ADI - (Austempered ductile iron), Low-Alloy Steel, High-Alloy Steel, Stainless Steel, Duplex Stainless Steel	Aluminium, Copper	Aluminium, Zinc, Magnesium	Iron, Ductile Iron, ADI - (Austempered ductile iron), Low-Alloy Steel, High-Alloy Steel, Copper



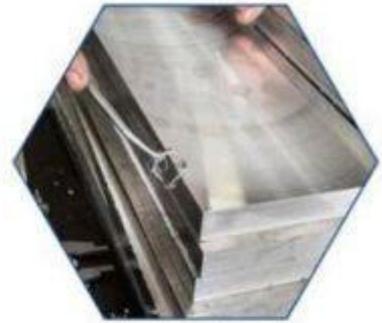
Multiple Production Processes



Die Casting



Polishing



Deburring



Drilling



Tapping



CNC Machining

Surface Treatment



Chemical oxidation



Painting



Electrophoresis



anodizing



Sand blasting



Electroplating

Inspection Equipments



2.5D manual image measuring machine



height tester



hardness tester



Coordinate Measuring Machine



TESA-HITE 400



Salt spray test machine



CCD optical detector detection



Arm CMM

Q1:How to customize products?

A1:Attach your drawings with details (material, surface treatment, quantity and special requirements etc).

Q2:Can you make the parts based on the sample?

A2:Yes, we could provide a rough cost and will measure and design the drawing according to your sample.

Q3: Can my design be safe after sending it to you?

A3: We can sign the NDA before you send it.

Q4:What kind of production service do you provide?

A4:Mold making, lost wax casting, die casting,sand casting,CNC machining, stamping, plastic injection, assembly, and surface treatment.

Q5:How does the company control the quality?

A5: Inspection product with professional equipment , like CMM, height gauge, caliper & micrometer, Ultrasonic fault detector, Hardness tester, Spectrum analyzer, impact testing machine, quadratic equipment .

Q6:How could I pay them?

A6:Paypal, Western Union, T/T, L/C are acceptable, so just let us know which is convenient for you.