



## Casting Material: Carbon Steel BS3100 Gr. A2

Carbon steel Grade A2 is one British steel casting material, which is a popular steel material in casting purpose.

Grade A2 is listed in BS3100 standard which is superseded by GE240 in BS EN10293:2005.

Similar Casting Steel: ZG230-450; ASTM A27 Gr. 65-35[450-240]; SC410(SC42); GS-45(1.0446); ASTM A216 WCB; GE240

BS 3100:1991 Specification for steel castings for general engineering purposes

### BS 3100 Grade A2 Casting Chemical Requirements and Mechanical Property:

Carbon: 0.35max  
Manganese: 1.00 max  
Silicon: 0.60 max  
Sulfur: 0.050 max  
Phosphorus: 0.050 max

### Grade A2 TENSILE REQUIREMENT IN STANDARD.

Tensile Strength: 490Mpa min  
Yield Strength: 260Mpa min  
Elongation: 18.0% min  
Charpy V-notch: 20J @ 20° C.  
Angle of Bend: 90°  
Radius of Bend: 1.5t<sup>4</sup>



**BS3100 Gr A2 Casting Heat treatment process:** Generally all castings need to be annealed or normalized; or N+T; or OQ+T; or WQ+T

*A - For anneal by heating to a temperature above the AC<sub>3</sub> and cool in the furnace.*

*N - For normalize by heating to a temperature above AC<sub>3</sub> and cool in the still air.*

*OQ - For quench into oil from a temperature above AC<sub>3</sub>*

*WQ - For Quench into water from a temperature above AC<sub>3</sub>*

*AH - For air harden by heating to a temperature above AC<sub>3</sub> and cool in air at a rate fast enough to produce a hardened microstructure*

*T - For temper by heating to a temperature below AC<sub>1</sub>.*

*ST - For solution treat by heating to a temperature high enough to dissolve carbides and any intermetallic phases followed by a rapid cool.*

**Steel Manufacture Process: Sand Casting, Precision Lost Wax Investment Casting.**

### **SERVICE IN QINGDAO CASTING QUALITY INDUSTRIAL**

I SAND CASTING

I INVESTMENT CASTING

I SHELL CASTING PERMANENT MOLD CASTING CNC MACHINING



As a professional casting manufacture, Qingdao Casting Quality Industrial pay much attention to the quality and technology, our products are much more casting and forging parts. We are mainly do Sand Casting, Investment Casting (Lost Wax Casting or Precision Casting) and Die Casting .Today, its products are marketed globally through many countries.

## Our Services

Casting Quality focus on Metal Parts industry, we provide professional service in Metal Casting field.

1. Sand Casting
2. Investment Casting
3. Shell Casting
4. CNC Machining
5. CAD Design
6. Tools/Mold Design

Many buyers from all over the world purchase products from China. But do you know the quality of products in China? Maybe you only pay the surface and price, but the inner quality is lost.

Housing Casting Design in Solidworks

## What makes Casting Quality the best?

### Innovation

Our engineers are more than just designers...they're pioneers. Our team use CAD/CAM to do the simulation of casting parts .Through the advanced technology, we can know the weight and structure. We also visited so many factories to know their difference and improve our products every year.

### Quality

We're obsessed with quality. Casting Quality constantly strives to exceed our customers' expectations in durability and performance. In fact, we will control the whole process from the original material to the finished parts , include the technology .Uniquely-designed Quality Control System focuses on ensuring four product goals: 1) Eligible Chemistry , 2) Hardness 3) Property and 4) Affordable Pricing. The result is the best casting products value in the industry.

### Service

We're in Qingdao,China, It has convenient transportation of road and sea. Courteous service is part of who we are, and we do it better than anyone in the industry. With Casting Quality you can expect friendly, knowledgeable, and prompt customer service.

### Fulfillment

Shipping orders complete and on-time is of paramount importance to our customers. We will count the delivery date and result before accept your order. Casting Quality consistently ranks as one of the best in speed of delivery and fill rates.



## Introduction

As professional supplier of castings in China, Qingdao Casting Quality Industrial Co., Ltd provide our clients perfect solution in metal industry. We focus on providing service and quality exceeding customer's expectation, at highly competitive prices.

The production process includes sand casting, investment casting, die casting, lost foam casting, centrifugal casting and permanent casting. Today, its products are marketed globally through many countries.

Why Choose Casting Quality As Your Partner?

### **Integrity**

We will honestly inform our clients of our capacity and quality level. All clients have the right to get the actual details including production process, quality, shipment and defects. The honesty will be benefit to both parts.

### **Innovation**

Our engineers are more than just designers. They are pioneers. Our team use CAD/CAM to make the simulation of casting parts. Through the advanced technology, we can know the weight and structure. We also visit many other factories to know the differences and to improve our products every year.

### **Quality**

We are obsessed with quality. Casting Quality constantly strives to exceed our customers' expectations in durability and performance. In fact, we will control the whole processes from the original material to the finished parts, Uniquely-designed Quality Control System focuses on ensuring four product goals: 1) Eligible Chemistry, 2) Hardness 3) Mechanical Property and 4) Affordable Pricing.

### **Service**

We are located in Qingdao, China, The transportation is convenient for both road and sea. Courteous service is part of who we are, and we do it better than anyone in the industry. With Casting Quality you can expect friendly, knowledgeable and prompt customer service. Shipping orders complete and on-time is of paramount importance to our customers. We will count the delivery date and result before accepting your order .Casting Quality consistently

# INTEGRITY

# QUALITY

# INNOVATION







## Centrifugal Casting

Centrifugal Casting mainly produce the pipes or pipe figure products , such as ductile iron pipe , cast iron soil pipe , glass roller , Furnace Roller and radiant



## Lost Foam Casting

Lost-foam casting (LFC) is a type of evaporative-pattern casting process that is similar to investment casting except foam is used for the pattern instead of wax. This process takes advantage of the low boiling point of foam to simplify the investment casting process by removing the need to melt the wax out of the mold. Casting Quality Industrial only supply ductile iron or steel parts by lost foam casting method, such as valve body, impeller, pipe fittings, electrode and simply figure parts .



## Die Casting

Die casting is a metal casting process that is characterized by forcing molten metal under high pressure into a mold cavity. Die Casting is generally use to make aluminum and zinc alloy parts.



## Permanent Casting

permanent casting and low pressure casting, Casting Quality only used to make aluminum castings, permanent casting can get a better surface and dimensions than sand castings, low pressure casting can get a stably structure which are suitable to the endure pressure parts.





## Quality Control

Experienced inspection team of Casting Quality conducts the entire quality control procedure from raw material to finished products. All inspectors are well trained and have rich product knowledge & inspection experiences.

- \* Raw Material Control.
- \* Chemistry Spectrum Analysis
- \* Mechanical Property
- \* Metallographic Analysis
- \* Ultrasonic Testing
- \* Magnetic Testing.
- \* Radiographic Testing.
- \* Dimension Inspection.
- \* Visual Inspection
- \* Dimension Checking
- \* Chemical Analysis
- \* Penetrant Testing
- \* Leak Testing
- \* Hardness Test

