QT-HBW175 Ductile Cast Iron Casting Material

Introduction

QT-HBW175 is a spheroidal graphite iron casting grade covered by GB/T 1348. Typical applications include machined housings, hubs, gear blanks and general engineering castings.

Manufacturing Process

Sand Casting
Shell Molding Casting
Lost Foam Casting

Equivalent Materials

N/A

Reference Standards

Standard	Standard Title	Edition	Specification	Identifier
GB/T 1348	Spheroidal graphite iron castings	2019	QT-HBW175	—

Physical Properties

N/A

Chemical Composition

No specified chemical composition limits in GB/T 1348

Heat Treatment

GB/T 1348–2019

Heat treatment may be required under agreed delivery or retesting conditions. No grade-specific heat-treatment temperature or holding schedule is prescribed.

Mechanical Properties

Core Mechanical Properties

GB/T 1348 — 2019 · Table E.2 — Informative

Property	Test window 1
Brinell Hardness	160–190 HBW[1]
Tensile Strength	>= 450 MPa[2]
Yield Strength (Rp0.2)	>= 350 MPa[2]

Test bar or agreed position on casting; manufacturer selects a representative casting position in the absence of agreement; Annex E applies only by agreement. Tensile/proof strength values are reference data when hardness is the inspection characteristic. QT-HBW300 and QT-HBW330 are not applicable to thick-walled castings. Hardness testing frequency and number are agreed; E.3 procedure applies when hardness and tensile properties are both specified.; Informative reference value; not an acceptance requirement

Notes

GB/T 1348 · Edition 2019

[1] Brinell Hardness: GB/T 231.1

[2] Tensile Strength/Yield Strength (Rp0.2): Reference only

Welding Conditions

N/A

Applications

Ductile iron GB/T 1348 Grade QT-HBW175 is used for machined housings, hubs, gear blanks and general engineering castings. This designation is selected by its specified hardness requirements rather than by assuming a particular tensile grade. The intended component must therefore be checked against the agreed hardness range and any additional mechanical requirements.

Family-level examples do not establish a grade-specific pressure, impact or fatigue rating.

CASTING QUALITY

Last Updated: 2026-11-06

Casting Quality Industrial

As a professional manufacturer in China, We Casting Quality focus on Metal Parts OEM industry, and provide solutions and services in Metal Casting field as following:

Sand Casting

Investment Casting, Lost Wax process

Shell Casting

Lost Form Casting

Permanent Mold Casting

CNC Machining

CAD Design

Tools/Mold Design

Material Supplied

Cast Iron Castings (Grey Iron, Malleable Iron, Ductile Iron)

Carbon Steel and Alloy Steel Castings

Stainless Steel and Duplex Stainless Steel Castings

Aluminum Castings

Bronze and Brass Castings

Titanium and Cobalt Alloy Castings

What We Can Do

Design Ability

Our engineers will help you to improve the designs based on casting technology, then The simulation software will be processed to verify the casting pouring system. Pro/E, Solidworks, AutoCAD and ProCast are available in Casting Quality Industrial.

Saving Cost

Some manufacture processes may lead high cost. We will analyses the designs and advise the suitable methods to our customers. The best solution will be adopted.

Quality Control

From the raw material selecting to bulk production processing, all procedures will follow PPAP program if necessary. The certificates will be provided including chemistry, hardness, mechanical property or NDT testing.

Production Capacity

The max iron/steel castings can reach 30tons in weight, meanwhile the minus casting is around 1gram only.

We also have prototyping and 3D scanning ability for sample plan.

Logistic Service

The products will be delivered directly to customer’s workshop, which will save plenty of work for clients.

Contact with Us Immediately:

Mark Wang

Email: mark@castingquality.com

WhatsApp: +861396488078

Website: www.castingquality.com

CASTING QUALITY