EN-GJL-HB175 (EN 5.1201) Grey Cast Iron Casting Material

Introduction

EN-GJL-HB175 is a grey cast iron grade covered by EN 1561. Typical family applications include shaped covers, simple housings, counterweights and decorative and non-critical cast components.

Manufacturing Process

Sand Casting
Shell Molding Casting
Lost Foam Casting

Equivalent Materials

Standard	Material Grade
GB/T 9439	H175
SAE J431	H11
ISO 185	ISO 185/JL/HBW175

Reference Standards

Standard	Standard Title	Edition	Specification	Identifier
EN 1561	Founding - Grey cast irons	2023	EN-GJL-HB175	—

Physical Properties

N/A

Chemical Composition

No specified chemical composition limits in EN 1561

Heat Treatment

EN 1561–2023

Heat treatment for special applications may be agreed when the order is accepted; no fixed cycle is prescribed. If heat treatment is applied, representative samples must receive the same treatment as the castings.

Mechanical Properties

Core Mechanical Properties

EN 1561 — 2023 · Table 2 — Normative

Property	Hardness classification
Brinell Hardness	100–175 HBW[1] 110–185 HBW[2] 125–205 HBW[3] 140–225 HBW[4] 170–260 HBW[5]

Casting or cast-on knob; test position agreed with purchaser; Sand moulds or moulds with comparable thermal behaviour; properties refer only to the stated sample type and wall-thickness range; Hardness classification only for wall thickness up to 80 mm. A narrower agreed range shall remain at least 40 HBW wide.

Notes

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[1] Brinell Hardness: wall thickness <= 80 mm

[2] Brinell Hardness: wall thickness <= 40 mm

[3] Brinell Hardness: wall thickness <= 20 mm

[4] Brinell Hardness: wall thickness <= 10 mm

[5] Brinell Hardness: wall thickness <= 5 mm

Welding Conditions

N/A

Applications

For grey cast iron EN 1561 EN-GJL-HB175, typical cast components in this material family include shaped covers, simple housings, counterweights and decorative and non-critical cast components. Typical settings include general machinery, building hardware and equipment assemblies. These family examples do not extend light-duty uses to highly loaded moving parts or pressure-retaining equipment.

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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.

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