

**Cast iron, an age-old art 2.0**





Aesthetic, resistant, durable, recyclable, repairable, timeless, robust, creative





Cast iron, a 100% natural material



Cast iron is the result of perfect fusion. In our workshops, the incandescent material takes shape thanks to expert handling and unique know-how.

This magical world that combines technology and poetry fascinates everyone who discovers it.





# Glossary

---

Foreword.....	p.5
Cast iron.....	p.7
Ghm.....	p.11
Sustainability and service life.....	p.13
Recyclability.....	p.15
Environmental commitment .....	p.17
Aesthetics and heritage .....	p.19
Contributing to sustainable urban development .....	p.21
From an idea to the product .....	p.23
Creative know-how.....	p.25
Shapes and textures.....	p.27
Strength and robustness .....	p.29
Renovation and restoration.....	p.31
Man at the heart of matter .....	p.33
Training and transmission .....	p.35
A team devoted to excellence.....	p.37
Expertise .....	p.39
Innovation.....	p.41
Nantes, an extraordinary achievement .....	p.43



Molten metal



# Foreword

---

When the earth gives us its resources - water, wood, iron and sand - it's up to Man to transform them sustainably. With care and passion, these elements become more than just materials: they are the essence of a true art.

The alchemy between iron and fire is how cast-iron lampposts, fountains and street furniture that embellish and enrich our public spaces are born. Each piece is the result of a complex, precise process that combines craftsmanship and creativity.

Cast iron, a timeless material, is constantly reinventing itself. Its malleability means that even the most daring ideas can be brought to life, offering an infinite range of shapes and textures.

The plasticity of cast iron has always fascinated artists, who use that freedom to create unique works that go beyond conventions.



Place Pelletier - Eclaron

# Lamellar graphite cast iron.

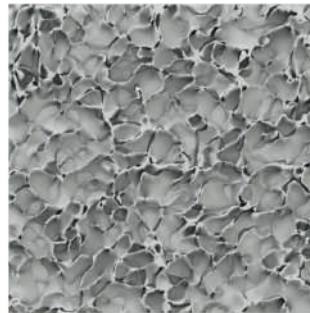
---

Lamellar graphite cast iron is an iron and carbon based alloy. The carbon is mainly in the form of graphite particles with a lamellar geometry.

**It provides good machinability, vibration absorption and castability.**

Lamellar graphite cast iron is popular for furniture, offering designers infinite creative possibilities in terms of shape and texture.

Designation: EN GJL 200 where 200 denotes the tensile strength in N/mm<sup>2</sup> (minimum value).





Overhead contact line support - Florence - Italy

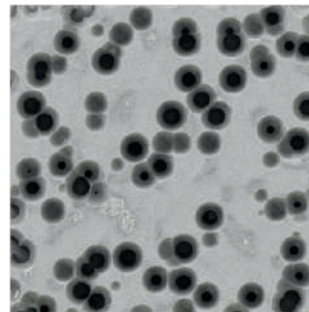
# Spheroidal graphite, or ductile, cast iron

---

Spheroidal graphite cast iron is similar to lamellar graphite cast iron in many respects, but the carbon is present in spheroidal form due to magnesium additions that cause the graphite to crystallise.

Spheroidal graphite cast iron is also known as ductile cast iron. **Its qualities provide significant mechanical strength at the top of the pole and high shock resistance** it is the ideal material for overhead contact line support production and high cast-iron masts.

Designation: EN GJS 400-18 where 400 denotes the tensile strength in N/mm<sup>2</sup> (minimum value) and 18 the minimum elongation in %.





Aerial view of the Sommevoire plant

# Ghm

---

Ghm, France's only designer and manufacturer of cast-iron lighting equipment and tramway masts.

Born in 1837 in Sommevoire, in the heart of the Haute-Marne region of France, **Ghm** specialises in the unique iron casting process. We have a rich history of prestigious heritage projects.

It still stands out for its ability to create high-quality ornamental elements for public lighting, street furniture and tram overhead contact line masts..

As well as the aesthetics and durability of our products, we are also committed to an approach that respects the environment and sustainable development.

**Ghm has been a signatory of the United Nations Global Compact since March 2024.** Thus, **Ghm** is committed to respecting the fundamental United Nations principles, such as human rights, labour rights, the environment and the fight against corruption. To do that, **Ghm** is committed to the 2030 Agenda and the Sustainable Development Goals.

GHM was awarded the French Living Heritage Company label in 2018.





Needle mast - Bordeaux

# Sustainability and service life

---

**Cast iron products are renowned for their robustness and long service life.** Unlike other materials, cast iron does not easily deteriorate under the effects of weather or over time. That reduces the need for frequent maintenance or replacement of equipment, thereby reducing the environmental footprint associated with manufacturing and transporting new products.

Furthermore, **ornamental cast iron can be restored and reused** thus extending its useful life. Each tonne of recycled scrap metal saves around 1.5 tonnes of iron ore and 0.5 tonnes of coal.

Cast iron products have a **service life in excess of 100 years** offering a very positive carbon impact in terms of durability.

13





# Recyclability

---

Cast iron is 100% recyclable without loss of quality. At the end of their service life, cast iron products can be melted down and reused to create new items, thereby **limiting waste and the extraction of new raw materials**.

**Our production methods are optimised to minimise waste and maximise energy efficiency.** The modern technologies used in our foundries make it possible to reduce CO2 and other pollutant emissions. For example, the use of electric furnaces in our foundry reduces CO2 emissions by 60% compared to traditional methods.





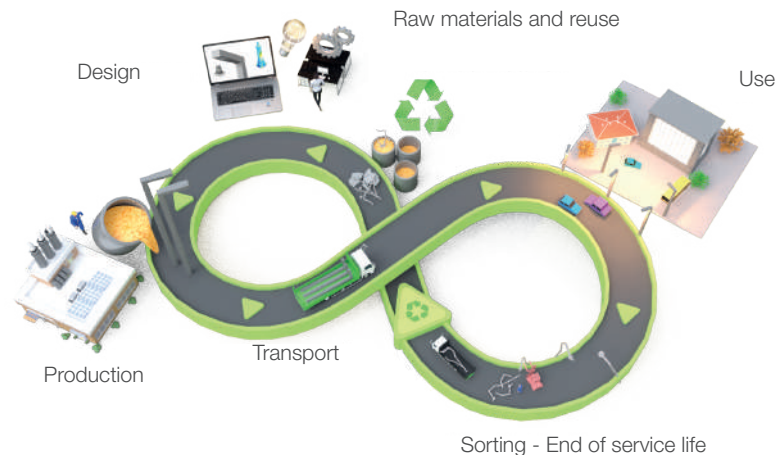
# Environmental commitment

---

By including circular economy practices, **our iron casting process makes it possible to reuse recycled ferrous materials**. This approach reduces the consumption of natural resources and promotes sustainability.

**Our employees are deeply committed to our environmental approach.** They take an active part in implementing sustainable practices in our foundries and in finding solutions to reduce our carbon footprint. That personal commitment is reflected in the quality and durability of our products.

**Ghm** is ISO 14001:2015 certified





Lighting columns - Place Stanislas - Nancy

# Aesthetics and heritage

---

Ornamental cast iron adds significant aesthetic value to public spaces. It contributes to the beauty and heritage of towns and cities, offering unique and timeless design elements. **A high-quality, aesthetic environment encourages people to respect and protect public spaces.**

Studies show that well-designed public spaces significantly increase community involvement and footfall.





Angers



# Contributing to sustainable urban development

---

By choosing ornamental cast iron for street lighting, street furniture and overhead contact line masts for tram lines, local authorities invest in sustainable, environmentally-friendly solutions. **The durability and low-maintenance of such equipment means that long-term savings can be made and sustainable urban management practices can be promoted.**

A cost-benefit analysis carried out by several city halls has shown that the maintenance and replacement costs of cast-iron equipment are lower than those of other, less durable materials



Watt columns - Paris  
Designers: S. Dubuisson - B. Fortier

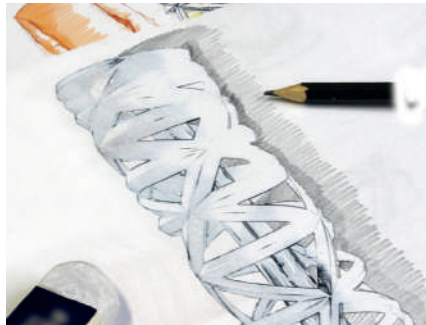
# From an idea to the product

---

Design to embellish every space, **every product is treated with incomparable expertise** maintained every day by people with a passion for exceptional products.

Moving from an intention to a finished product requires solid experience and specific resources.

The transformation involves a blend of master crafts and modern technologies.





Aimé Césaire

M

Metro entrance, Paris  
Designer: M. Aurel

# Knowing how to create

---

The collection of sketches, drawings, tools and models collected by **Ghm** over the 185 years of its existence and ambitious projects can be seen in the most prestigious developments born of the collaboration between **Ghm** and renowned designers and architects.

Modern creations resulting from an exceptional heritage.

- ARCHITECTURE ACTION
- ARPENTERE
- Marc AUREL
- Auguste BARTHOLDI
- Ruedi BAUR
- Jean-Marc BOURRY
- Alexandre CHEMETOV
- Luc DAVY
- Jean-Paul DESCHAMPS
- Sylvain DUBUISSON
- Jean-Marie DUTHILLEUL
- Nicolas FEDORENKO
- Bruno FORTIER
- Hector GUIMARD
- Akari-Lisa ISHII
- Sovann KIM
- Albert LAPRADE
- Françoise PERSOUYRE
- Cécile PLANCHAIS
- Babeth PROST
- Yannick SALLIOT
- Julien SCHNELL
- STOA ARCHITECTURE
- Michel TORTEL
- Jean-Michel WILMOTTE
- Obras architectes & Icon Lighting Design
- ...



Lighting columns - Place Graslin - Nantes  
Designer: N. Fedorenko

# Shapes and textures

---

**Cast iron provides an infinite choice of shapes and textures.**

**The plasticity of the material lends itself to designers' intentions** when it comes to giving meaning to their creations and suggesting a signature that ennobles urban spaces over the long term.

In fact, **cast iron allows for some very modern interpretations** it is the perfect choice to surprise and delight city dwellers with daring styles.

This aesthetic dimension is developed without detracting from the widely recognised technical qualities that have long made this material a success in the urban context.

27



*Flore furniture  
Designer: F. Persouyre*



*Lighting column  
Designer: P. Starck*



Majestic lighting columns - Orléans  
Overhead contact line support masts



## Strength and robustness

---

**This material has proven its strength over time** and withstands the knocks and bumps of urban life.

In some cases, the choice of spheroidal cast iron provides exceptional mechanical characteristics.

**Excellent scalability:** a cast-iron product can more easily take on extra loads that were not foreseen when the product was created (flowering, signage, events, sound systems, etc.), while keeping a certain practical rigidity for the use of equipment (CCTV, for example).

The natural strength of cast-iron masts provides excellent **protection from impacts and vandalism** for example, their rigidity also prevents the traditional "resonance" of masts, which can damage luminaires.

Cast iron products from **Ghm** have corrosion treatment that guarantees a long service life; the components are first shot-blasted, then sand-blasted, degreased, metallised by adding a zinc film and finally protected by powder coating or liquid paint.

The textures and shapes of cast iron also discourage illegal posting and graffiti.



Restored monumental fountain - Villedieu-les-Poêles

# Renovation and restoration

---

**What product is more responsible than a product that doesn't need to be replaced?**

**Ghm** is regularly involved in the renovation of works that were sometimes installed over 100 years ago (broken, cracked or even missing parts).

The service can also include the renovation of the fountain's internal hydraulic circuit.

**This is one of cast iron's biggest advantages as it makes it possible to durably enhance public spaces.**

31



*The Nancy Thermal fountain before its renovation*



*The Nancy Thermal fountain once restored*



Hand casting - Creating a mould

# Man at the heart of matter

---

At **Ghm** our success is based not only on the exceptional quality of our products, but also on the **commitment, expertise and passion of the people in our team**. Every member of our staff makes a unique and essential contribution to our mission of creating sustainable and aesthetically pleasing ornamental elements for urban spaces.







## Training and transmission

---

At **Ghm** training and passing on know-how are fundamental values. **We continually invest in the training of our staff, both in technical and creative terms.** Young talent is mentored by experienced master craftsmen, thereby guaranteeing the long term existence of our unique expertise.





Machinist



## A team devoted to excellence

---

Every project we undertake is the fruit of teamwork in which every detail counts. Our teams, whether in the workshop, the design office or in the field, work in close collaboration to guarantee the satisfaction of our customers and the success of every project.

Without the dedication, passion and expertise of our employees, we would not be able to maintain our position as leader in ornamental cast iron.

It is thanks to them that we can continue to innovate, preserve our heritage and contribute to the sustainable development of our cities. **Their commitment is the key to our success and the guarantee of the quality of our products.**



# Expertise

---

Our craftsmen and engineers are at the heart of our production process. With decades of combined experience, they perfectly master the traditional casting techniques while incorporating the latest technological innovations. Their expertise guarantees that **every product that leaves our workshops is not only functional, but also a work of art.**

Guaranteeing mechanical strength is vital for furniture destined for public spaces.

## **Computer-assisted secular art 2.0.**

Our engineers check the resistance of the products to stress and impacts using the appropriate software.

The reinforcement of critical areas is therefore decided at the design stage.



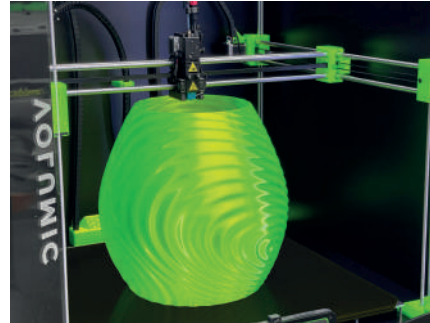


Design office and 3D scans

# Innovation

---

Innovation is at the heart of our philosophy. Our teams work constantly to improve our processes and develop new solutions to meet the changing needs of modern cities. This innovation culture is supported by our employees, who are encouraged to put forward ideas and experiment with new approaches.





Wallace fountain revisited - Place Fernand-Soit - Nantes  
Artist: C. Pedrosa

# Nantes, an extraordinary reference

---

A close collaboration between Le Voyage à Nantes organisation, artist Cyril Pedrosa and **Ghm** has injected new energy into our iconic fountain, bringing it into the modern age.

Thanks to this collaborative effort, the Wallace fountain has been reinterpreted to capture a contemporary artistic and cultural essence, while preserving its historic heritage.

**This project is a perfect example of our ability to combine tradition and innovation, by creating functional works of art that enrich and embellish public spaces** It also shows our commitment to working with artists and organisations to revive heritage features, while adapting them to new societal challenges.

43





---

Ghm is a member of the French AGORA-MAKERS group.

Together, we embody excellence and innovation.

We are committed to creating functional, aesthetic and sustainable public spaces, thereby helping to improve the quality of life of citizens around the world.

Our shared vision is to create environments where aesthetics meet functionality, where innovation meets sustainability.



[ghm.fr](http://ghm.fr)



Rue Antoine Durenne  
52220 SOMMEVOIRE - FRANCE  
Tél : +33 (0)3 25 55 43 21

[www.ghm.fr](http://www.ghm.fr)  
[contact@ghm.fr](mailto:contact@ghm.fr)

