

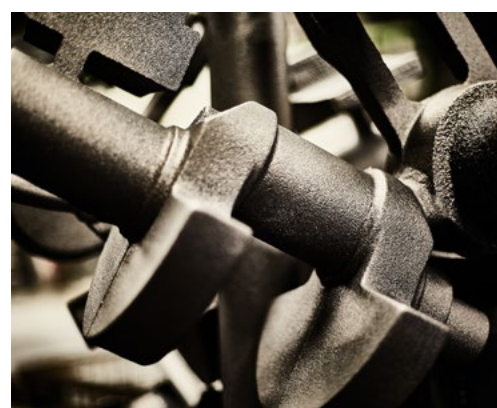


WE THINK
A STEP
ahead.



OPTIMISATION IS FOR US *a continual* PROCESS

For the Jürgens Foundry, optimisation processes on your projects are never over. Our conviction: Today's perfect results become even better as a result of tomorrow's process innovations. That is why our engineers and specialists are constantly optimising your castings.



A truly special feature of the Jürgens Foundry: At our company, every innovation flows directly into your project. You automatically benefit from the latest production techniques, casting processes and/or alloys. At the same time, we always use the latest innovations in the areas of component production, component assembly and post-processing options for your order.

Through our continual future-oriented thinking, we not only generate cost advantages for you, but also ensure the highest product quality according to the latest state of the art technology over the long term. You benefit from clear competitive

advantages. Because we not only implement your project one time but proactively consider new categories for you. As a result, you will continue to benefit from high-precision, resilient and economical castings made of spheroidal graphite iron (nodular graphite cast iron) and grey cast iron.





»» 6 successful STEPS OF COLLABORATION.

At the Jürgens Foundry you will reach project success with just six perfectly coordinated steps. Our engineers and casting specialists will support you with all their know-how in every phase of the project.

We want you to be as detailed as possible about several things – because the more information you give us about your planned project, the more precisely we can design your castings. Important information for our experienced specialists is always: Details regarding the required properties, the intended use and the application environment as well as any interaction with other systems.

We work closely with your technicians at each individual implementation phase in order to collect valuable feedback and initiate further targeted optimisation steps. The actual series

production does not start until you are completely satisfied with the casting result.

We use digital solutions for the transmission, conversion and processing of your design data so that you save time when working with the Jürgens Foundry. We use the latest 2D and 3D software solutions to plan your order, such as AutoCAD, GENIUS, Pro/ENGINEER and Creo 4.0.



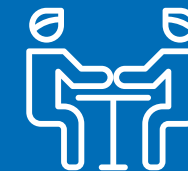
1. Step: BRIEFING

To start, the focus is on checking your designs and requests. Through our intensive consulting you will learn all the important facts needed to perfect your project.



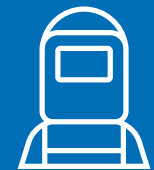
2. Step: PROTOTYPING

We perform extensive simulations, sample castings and test series for you. At the end you will receive a prototype under production conditions – with all the desired features.



3. Step: EXCHANGE

In this phase you will use the prototype for real-world tests in your company. Afterwards, if necessary, an intensive consultation exchange takes place to optimise your castings even further.



4. Step: CASTING + OPTIMISATION

Once the prototype has been approved, series production can begin. You receive all services from a single source: from raw casting through mechanical processing to finishing and post-processing.



5. Step: CASTING LOGISTICS (GLO)

Thanks to our corrosion-protected storage and just-in-time delivery, you benefit from our fast on-call availability with maximum material availability.



6. Step: OPTIMISATION

Our passion for perfection ensures the future reliability of your castings: Our highly qualified specialists consistently improve your project for future series production.

CASTING MATERIALS

We have specialised our casting processes for decades in the following fields:

Spheroidal graphite iron in accordance with DIN EN 1563 feature a high load capacity and special tensile strength.

Grey cast iron in accordance with DIN EN 1561 are characterised by low heat generation and good damping properties.

Unit weights: 1 to 1.000 kg



Maximum COMPETENCY

At Jürgens Foundry, 70 years of casting expertise is incorporated into every one of your projects. We have continually perfected our processes and procedures to ensure that you receive excellent casting results – for every single intended application.

Our casting expertise ensures that you receive tailor-made quality "Made in Germany" in every implementation phase:

CORE SHOP

Even with complex geometrical shapes in your components, you can rely on the highest precision fit according to DIN EN 1563 – thanks to our high-tech core shop. Here we can produce precise core moulds for you using the Cold Box process. Perfect results are delivered by our four core shooting machines with a shooting volume of 2.5 to 30 litres.



MOULDING

To ensure that each of your castings has a clean and perfect surface, our qualified foundry specialists produce precise moulds for you. For this we use two fully automatic drop moulding machines in different moulding box sizes. Our small-forming line works with a rotary model table for the production of upper and lower box moulds. The moulding sand is compacted using the SEIATSU airflow moulding process. In our large moulding line, we drive the models into the machine by means of model roller conveyors and thus produce a perfectly fitting mould.

SMELTING SHOP

Benefit from our high performance smelting shop and stay on the safe side even with large projects. Our three medium frequency electric crucible furnaces always deliver the most efficient smelt for you. You will also benefit from this service for short-notice project requests.



OUR STATE-OF-THE-ART MOULDING LINES

Small moulding line with AS 1 and AS 2

Moulding line type: HWS EFA-SD 3
Mould size: 620 × 620 × 220/220 + 50 mm
Capacity: 240 mould halves per hour
Unit weight: 1 to 120 kg

Large moulding line with AS 1, AS 2, AS 3 and LAS 1

Moulding line type: HWSDFM-S 7
Mould size: 1.500 × 1.200 × 400/400 + 50 mm
Capacity: 30 mould halves per hour
Unit weight: 80 to 1.000 kg

FULL SERVICE *more versatilely* DEFINED.

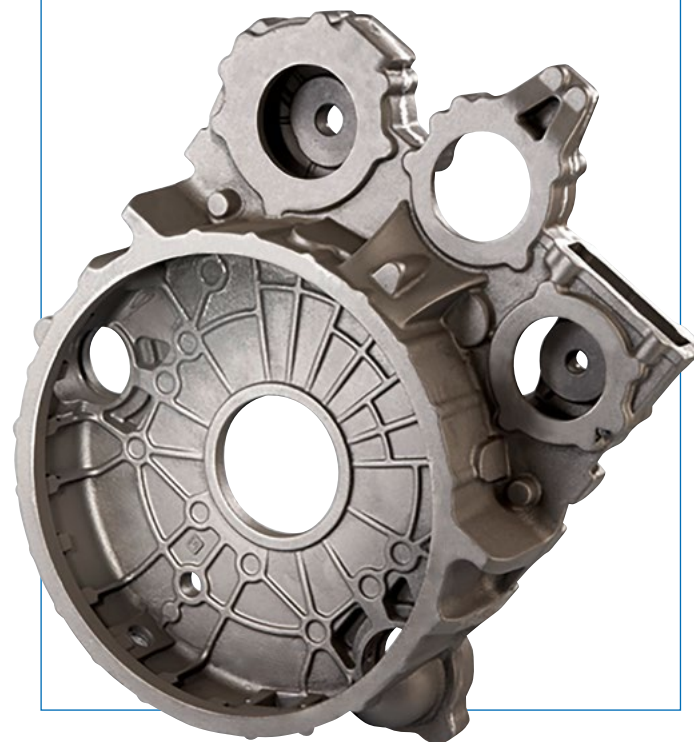
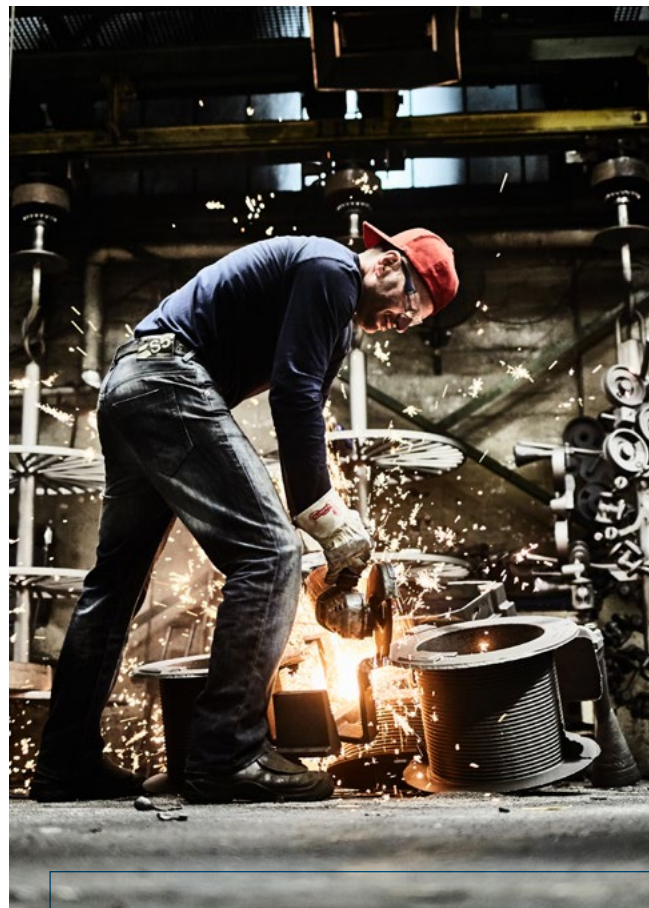
Full service at Jürgens Foundry means: You save time and money because you receive all follow-up services from a single source. From technical advice to on-schedule series production to finishing and post-processing.

Our comprehensive full service enables you to bring your casting projects to a successful result: not only do you receive detailed technical advice from our specialists, but you also receive a free quote with a concept for the cost-efficient realisation of your project. Using samples and prototypes produced under production conditions, we ensure that all castings meet your requirements.

On-schedule production and careful testing of your small and medium-sized series is carried out automatically in our own foundry – environmentally friendly, energy-efficient and sustainable. Our specialists also take care of the professional finishing of your cast parts: you can be sure that every single step is meticulously performed. Our range of services offers a wide variety of processing and coating options: From casting preparation by blasting and deburring to finishing with techniques such as annealing, priming, painting or galvanising.

In order to complete the custom manufacturing of your precision parts, we also undertake further post-processing steps such as drilling, turning, milling or the installation of entire components. This means that for every project you receive components ready for assembly and immediate use.

Our intelligent casting logistics (GLO) guarantee punctual delivery and maximum supply security. In addition, our friendly team is also happy to assist you with unplanned orders or the quick procurement of spare parts.



GLO: DELIVERY SECURITY *reliable* EXPERIENCE.

With the intelligent casting logistics (GLO) from Jürgens Foundry, you can use your castings worldwide, flexibly and just-in-time. At the same time, our casting logistics system ensures maximum material availability, quick response times and maximum delivery reliability.



From now on you can do without your own warehouse for your castings: We provide you with one of the most innovative casting logistics solutions on the market. In our fully automated high-bay warehouse system with conveyor belts, robots and a packaging system, each of your components has its own corrosion-protected space. Our IT-supported warehouse management maintains an overview at all times.

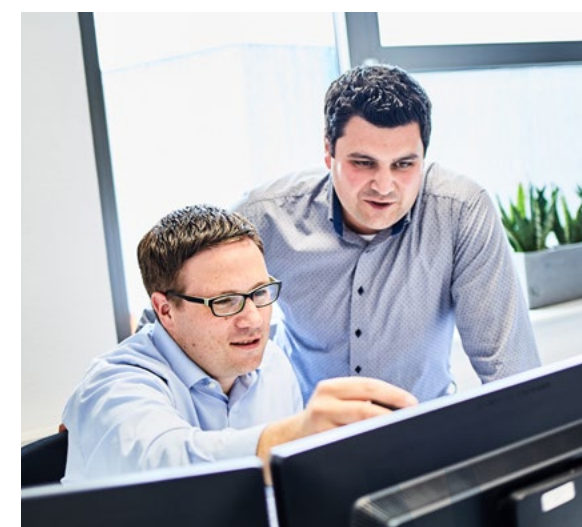
In addition, we label each casting individually according to your specifications, for example with product designations or your own codings. When we receive your delivery request, we will put all your desired castings together here in our loading hall.

See for yourself: GLO from the Jürgens Foundry stands for highly flexible warehousing with punctual deliveries.



CERTIFIED QUALITY FOR *higher-quality* PRODUCTS.

It is our clear goal to meet your high quality requirements down to the last detail. This is why we regularly have our products and processes tested and certified by independent parties. We ensure the highest standards with our quality management system in accordance with DIN EN ISO 9001.



In order to guarantee you consistently perfect quality, we carry out extensive tests on a daily basis. During the smelting process, this includes analyses with an optical vacuum emission spectrometer in order to examine the material composition and adjust it if necessary. In addition, we test your castings in the production cycle with our 3D Faro scanning system.

After casting, we inspect each charge based on the order and document the material quality of the corresponding castings. On request, qualified factory experts will also carry out further tests for you, for example tensile or impact tests per DIN EN 10204.

This is how we ensure that you can always trust the desired quality of your castings across the board.



Sustainable PRODUCTION BY CONVICTION.

Minimum use of resources and maximum recycling: Environmental protection is a top priority for the Jürgens Foundry. This is also proven by our up-to-date certifications.

We consider a responsible interaction with nature to be a matter of course. From the very beginning, Jürgens' corporate philosophy has been to minimize negative impact on the environment. That is why we have already done a lot – and today we are considered one of the cleanest foundries in Europe. Important steps were the introduction of an environmental management system in compliance with DIN EN ISO 14001 and an energy management system in compliance with ISO 50001.

Our employees are highly sensitive to the topic of environmental protection and themselves ensure that their actions are as resource-conserving as possible. The recycling rate of our bentonite-bonded moulding materials, for example, is over 95 percent. We even reuse almost 100 percent of the iron remainders from gate and feeder systems. Calculated on the basis of all raw materials used, we currently achieve a recycling rate of 97 percent. In addition, we use the waste heat from our melting furnaces for heating our company buildings during the winter months.

By doing so, we are raising the bar on environmental protection on a daily basis.

SAVE TIME, MONEY AND LABOUR:

The Jürgens Foundry makes production more efficient!



Customers often contact us and want to know whether we can optimise their production processes - as was the case recently with an enquiry from the construction machinery sector. For a long time, this customer used components manufactured with complicated welding technology - a highly complex process from a technical point of view. This challenge forced us to find the best possible and simplest solution for the customer!

Our suggestion: ready-to-install cast-iron housings that have already been machined - and can therefore be used immediately, without having to be subsequently adapted by the customer. After the first tests, the customer was impressed and our casting specialists were able to start series production.

But there was another challenge with this project: the welded construction had to be replaced by the new cast iron housings during ongoing operations. Therefore, together with the customer, our engineers worked out a precisely coordinated transition so that production would not have to stop - well thought-out down to the last detail, as is our goal.

The process described has had a lasting impact on the relationship with the customer: After the first successful changeover, the customer continues to rely on the know-how of the Jürgens Foundry for additional tasks.

- 1921** Founding of a business enterprise by Albert Bernhard Jürgens (1st generation)
- 1949** Founding of the Jürgens Foundry with sole specialisation in grey cast-iron
- 1954** Albert Hubert Jürgens joins the company (2nd generation)
- 1959** As the first foundry in Federal Republic of Germany: Development and production of ferritic spheroidal graphite cast iron in cast state without annealing equipment
- 1989** Albert Andreas Jürgens joins the company (3rd generation)
- 2002** Albert Andreas Jürgens becomes sole shareholder and managing director of Jürgens
- 2005** More space: Inauguration of the new foundry administration building
- 2008** Reduced particulate matter emissions: Construction of a large dedusting plant
- 2012** Capacity increase: new control and logistics building with 4.000 spaces
- 2013** Improved product quality and greater environmental protection: new sand preparation plant
- 2016** Technology upgrade on the small-forming line: new automatic casting machine
- 2019** Increased smelting capacity: Commissioning of the powerful "Twin Power" furnace plant

EXPERTS WITH 70 YEARS OF CASTING EXPERIENCE.

In addition to in-house production in Germany, our many years of experience offer a special quality feature. Over the past 70 years, we have continued to perfect our processes and products.

The Jürgens company is almost 100 years old and today comprises three divisions: Jürgens Foundry, Jürgens Packaging Technology and Jürgens Weaving Machines.

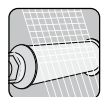


Already in 1921 Albert Bernhard Jürgens founded a commercial enterprise, which he expanded in 1947 to include weaving machine production and in 1949 to a foundry. 2004 saw a further major expansion with the entry into packaging and automation technology.

Under the umbrella of Jürgens Holding, the three divisions now benefit from beneficial synergy effects. The Jürgens Foundry, for example, has its own production facilities in the field of mechanical engineering, which are used for the final assembly of ready-to-install precision castings. This means that every step is simple - from planning to final assembly.

Jürgens

FOUNDRY



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