arburgGREENworld

Circular economy and efficient use of resources

ARBURG

KEY DRIVERS

**Protecting resources,
creating cycles,
increasing efficiency.**

For us, plastic is a material that improves our lives in many ways. But it is also a recyclable material that must be used sensibly, reused several times and efficiently exploited. This is only possible if everyone along the value chain works together to create an efficient circular economy. We offer a wide range of solutions to ensure sustainable production for our customers. And we provide answers to important questions in the field of plastics processing.

WIR SIND DA.

OUR MENTALITY: FOCUSED ON SOLUTIONS

// "Increased use of recyclates", "degradability" or "design for recycling" are approaches that only function in a perfectly coordinated and networked value chain. We recognise the dimensions of such extensive circular economy projects. Our efficient machine, process, automation and control technology in combination with innovative IT solutions can already deliver practice-oriented solutions for production processes based on a less intensive use of resources. \\

Recognising the problem

Plastics are a valuable resource that should be systematically utilised and recycled.

Understanding the dimensions

Efforts are needed across industries and from society.

Enabling solutions

Using fewer resources in the production process, establishing recycling systems.

Summit Talk 2019
What does a circular economy mean for the plastics industry? Find out more about the views of renowned experts here.

GREENmachine
Efficient and resource-friendly machine technology

GREENproduction
Innovative processes and networked workflows

GREENservices
Services relating to plastics processing

GREENenvironment
Manufacturing and business processes at ARBURG

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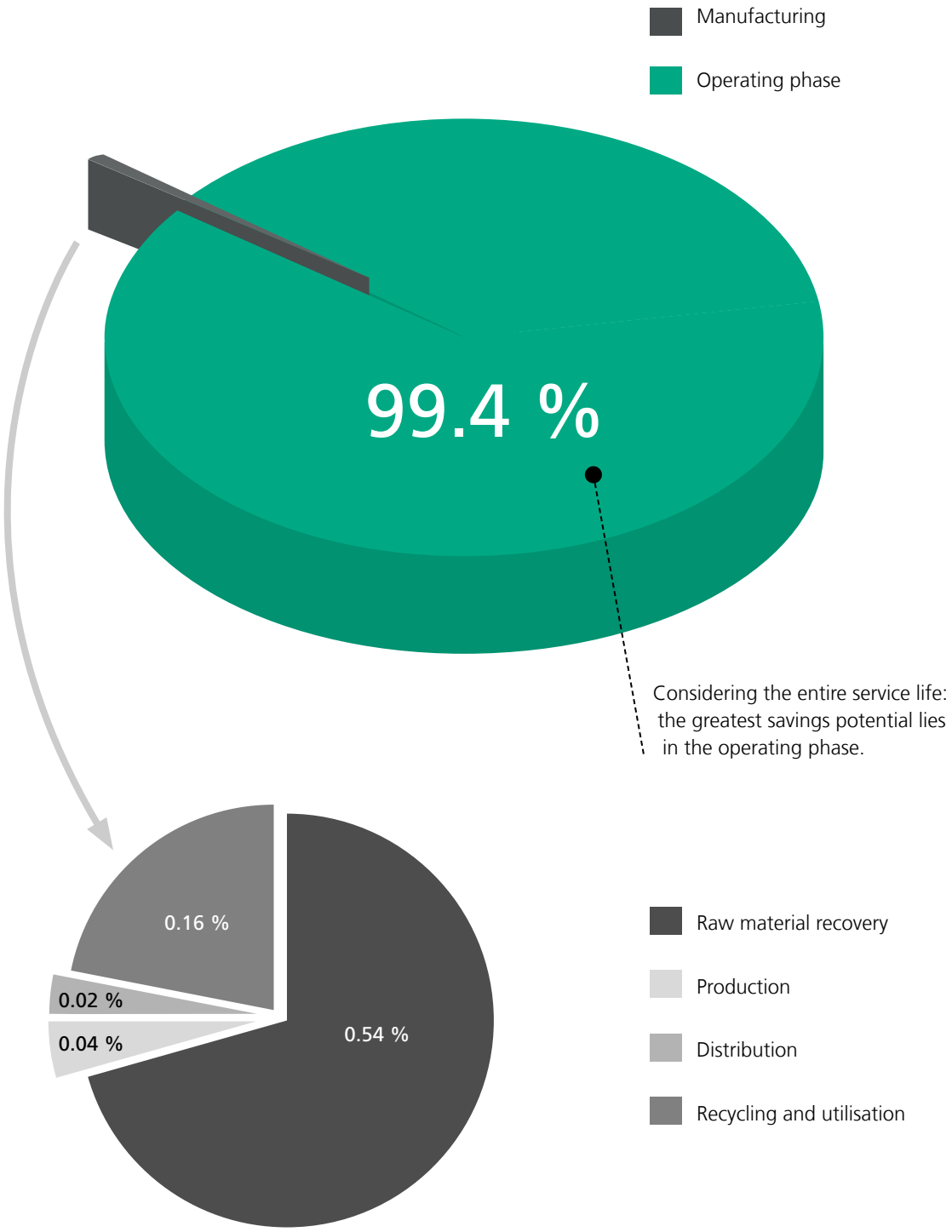
// Both a statement and a milestone. This action plan is a fundamental part of our corporate philosophy and is based on several principles: Solutions that customers can immediately use on their own premises. Innovations and internal processes that we implement on a daily basis at our sole production site in Lossburg (Germany) and then transfer to our subsidiaries all over the world. The aim is to continuously increase resource efficiency and to implement a circular economy in all areas of industrial production. We are enablers. Now and in the future. \\

Carbon footprint of a hybrid ALLROUNDER 1120 H*

Operating time:	approx. 54,000 hours (10 years)
Processed material:	approx. 5,800 tonnes of PP
Total emissions:	approx. 18,000 tonnes of CO_2 equivalent



* Values calculated: according to ISO TS14067: 2014, EUROMAP 60.1

EFFICIENT PRODUCTION REDUCES THE CARBON FOOTPRINT SUSTAINABLY.

Sustainable reduction of emissions

In 2018, the EU Commission published its strategy for a sustainable circular economy for plastics. The carbon footprint generated by production is an important aspect. ARBURG has taken into account all the relevant factors for reducing this footprint. We will approach the next steps systematically, together with our customers.

Anchoring production efficiency in strategic terms

Production efficiency is a definable objective for reducing the carbon footprint in a cost-effective way. If this can be made part of the corporate strategy right from the start, (additional) investments in resource-friendly operations will pay for themselves within a short time.

Economical operating phase

High-quality production at our central headquarters in Germany is the foundation for long-term, low-wear operation. Our efficient technology, which can be perfectly adapted to the most diverse demands, helps to reduce the energy requirement. Water-cooled drives also enable heat recovery.

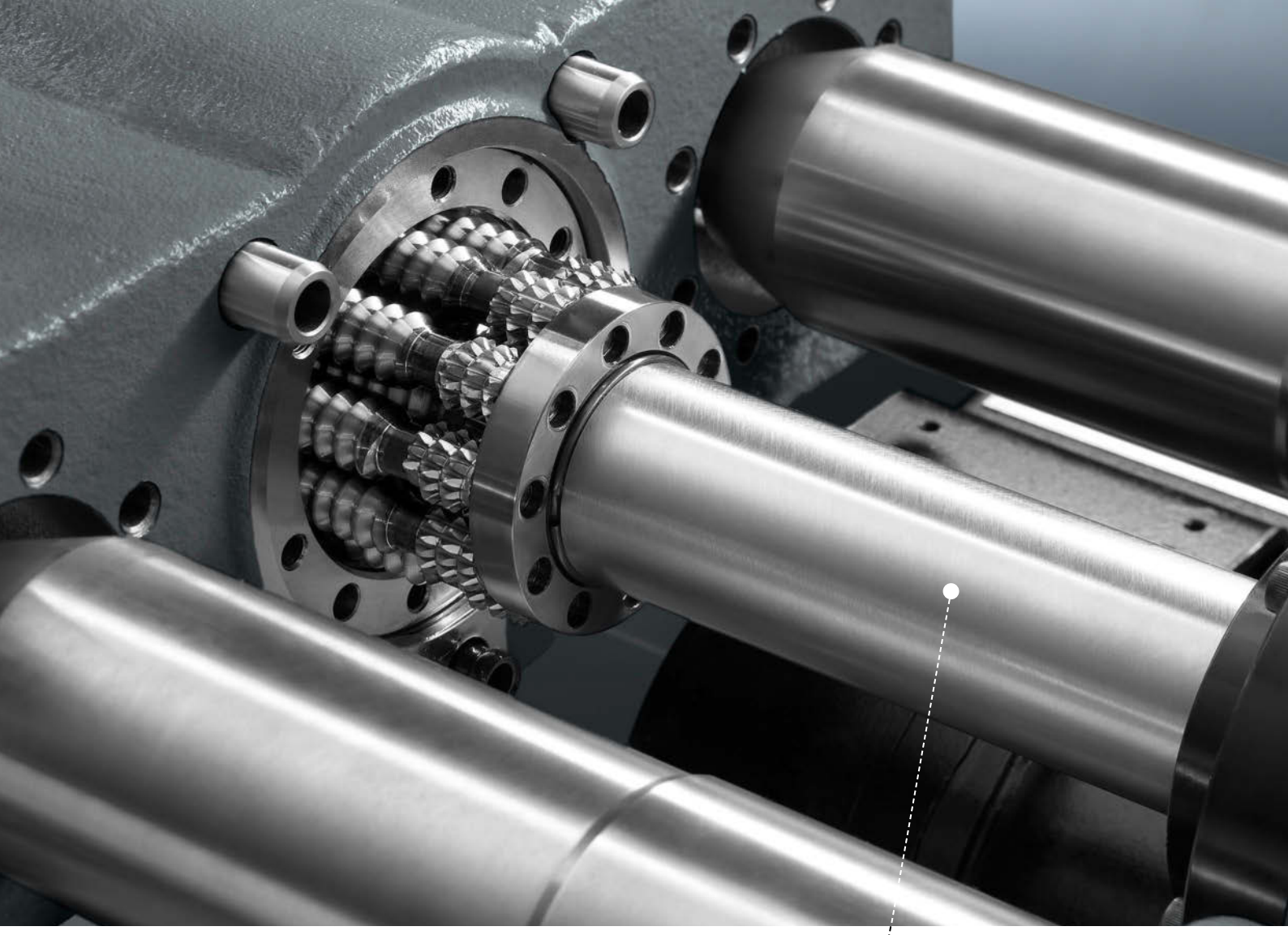
Efficient material processing

Much of the energy used in production is spent on melting and forming the plastic. Cycle times and the energy required for processing can be reduced by making application-specific adjustments to the material, process and process control.

The EU Commission states that a circular economy means that by 2030 companies will consume

32 % LESS PRIMARY MATERIALS

Further information:
Production efficiency brochure

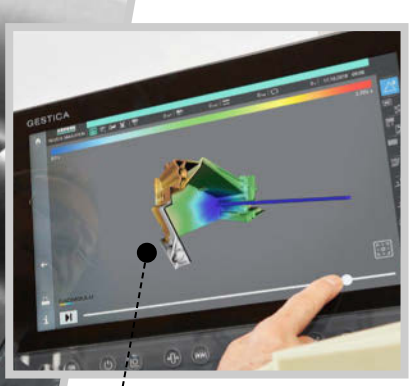


Servo-electric drive technology:
Basis for efficient material
processing.

GREENmachine

// Resource-friendly production starts with the energy-saving operation of injection moulding machines and safe processing of recyclates or degradable materials. In addition to machine technology, a sound knowledge of manufacturing processes is essential in this regard. Our targeted measures save primary energy and consequently reduce energy costs. Powerful machine technology, smart control systems and clever assistance systems from ARBURG – they're always a good investment in your "green" future. \\

Programmable vacuum generators: Air saving function reduces compressed air consumption.



Smart operator assistance: Filling assistant reduces material consumption during set-up.

High-end technology

Our machines' high degree of reliability is the result of many technical details. These include low-wear planetary roller screw drives, liquid-cooled motors and plasticising components with an application-specific configuration. Plastics can be processed efficiently on this basis – even those with more stringent requirements, such as post-consumer recyclates (PCRs).

Adapted dimensions

In our modular and adaptable injection moulding machines, you will find a perfect production solution that is suitable for long-term use and frees up resources for future investments. Cube tools, for example, halve the number of injection moulding machines required, depending on the application – saving space and reducing your production energy requirements. We can help you with individual advice and data-supported configuration.

Smart processes

Our machine control system offers extensive potential for actively saving resources. Practice-oriented assistance packages help to streamline complex production processes. The plasticising assistant, for example, can be used to quickly evaluate material preparation while our unrivalled position-regulated screw stabilises the injection moulding process. Benefit for you: fluctuations in material quality are evened out and your production requires less energy.

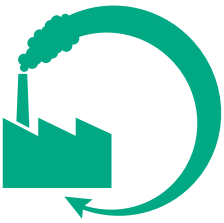
Further information:
Products and services brochure

GREENproduction

// Efficient processing of valuable materials: resource efficiency becomes production efficiency. The key innovations required for this can only be economically implemented by creating a flexible digital network for the entire value chain. Our "arburgXworld" provides you with targeted solutions – including support in coping with future requirements. This makes digitalisation the catalyst for a sustainable circular economy and, beyond that, for greater competitiveness. Because your "smart factory" reduces supply-related risks and makes entirely new business models possible. \\

Digital production

A form of production where you are always aware of capacity utilisation, idle times, etc., so resources are used less intensively at all times – guaranteed. We live by this philosophy: our central production site in Lossburg (Germany) has been digitalised throughout and is constantly being refined. With flexible process interlinking and efficient manufacturing technologies. This is what modern industrial production looks like.



According to the EU Commission, companies can save

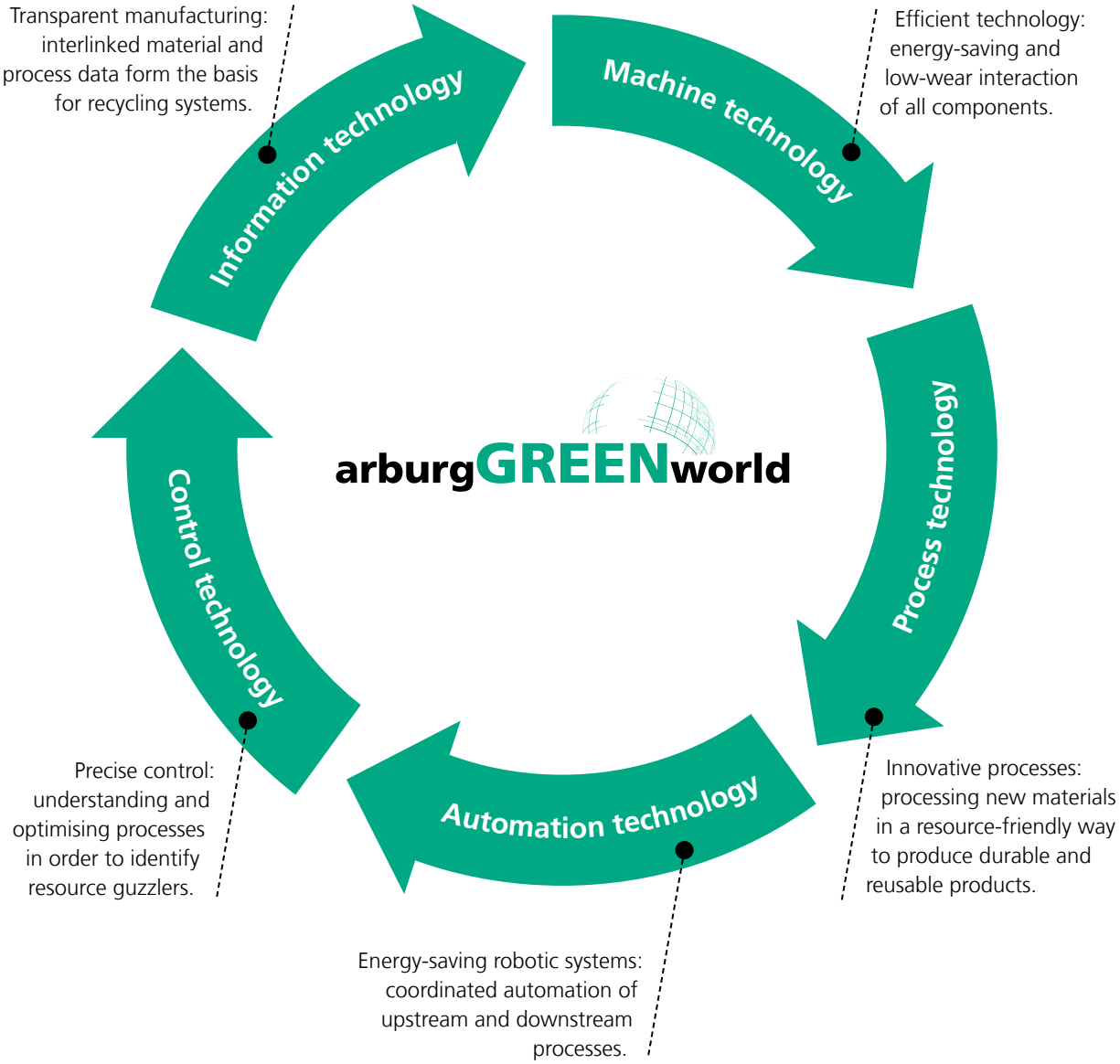
€ 600 million

EACH YEAR IN A CIRCULAR ECONOMY

Further information:
arburgXworld brochure

ARBURG
reddot award 2014
winner
freeformer
200-3X

MORE VALUE THROUGH EXPERTISE.



Interlinked processes: creating identity

It's a long-term task for the entire industry to use plastic as a high-quality resource. Unambiguous traceability of the products is helpful for this purpose. Our individual turnkey solutions and the ARBURG Turnkey Control Module (ATCM) enable important process and material data to be interlinked with a part ID – making your processes transparent and effective.

Additive manufacturing: new ideas

ARBURG Plastic Freeforming (APF) is very interesting when it comes to using new manufacturing technologies. The open system is ideal for rapid prototyping, part optimisation and small batch production. This saves costs right from the development phase for new products and enables the design of durable, reusable products.

Injection moulding: always innovative

Processing plastics using injection moulding technology offers huge potential for optimisation: barrier technology, for example, provides an opportunity to save on complex outer packaging while simultaneously increasing the shelf life of food. Perfectly calibrated injections allow the barrier layer to be extremely thin, thereby making the packaging recyclable.

Enabling innovations: industrial additive manufacturing for lightweight construction.

Enabling transparency: ATCM links processing and material data with the part.

GREENservices

// In a networked, fast-moving production environment, we address issues such as reusability (design for recycling) or durability (design for longevity) with customers and in renowned research networks. We aim to develop sustainable innovations that eliminate waste, extend the life of plastic products and encourage the use of recyclates. This requires comprehensive expertise and sound advice as well as a detailed range of services, for example through the worldwide networking of all our facilities. Because this is the only way to make support as fast and effective as it should be. \\

Our services:

- Continuous research and transfer of expertise
- Partnership-based cooperation with our customers
- Comprehensive after-sales services

Arburg is among the pioneers: "ProLemo" research project for manufacturing electric motors from lightweight materials.

More networking

We are happy to share our knowledge for a mutual solution – and we'll do so right from the start. We offer support for issues surrounding product design and the processing of innovative materials. We consider the entire injection moulding process in terms of productivity and energy requirements – using our comprehensive expertise.

Reducing emissions

Low-wear production has a positive impact on the carbon footprint. That is why our toggle-type clamping units are equipped with load-dependent lubrication. Our smart control technology monitors important components – saving spare parts and reducing machine downtime.

Finding solutions

Should malfunctions or downtimes occur, our unique "arburgXworld" customer portal offers uncomplicated and time-saving solutions. For a better overview, greater flexibility and rapid response. This minimises effort and saves resources.

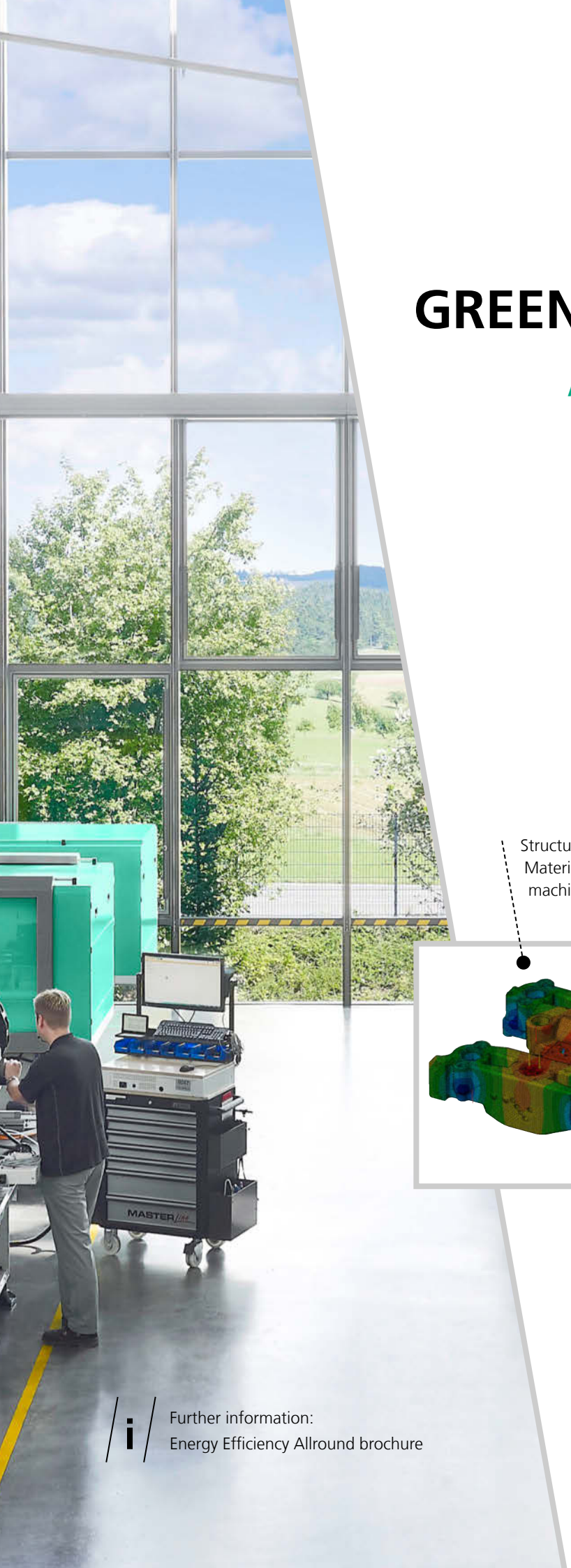
Streamlining processes

Thanks to digitalised processes in our global network of subsidiaries, our genuine spare parts will be with you in next to no time. Our qualified service technicians are coordinated flexibly and efficiently. This streamlines service calls, protects the environment and minimises production downtimes.

Premium service around the world: our own organisations in 26 countries and a total of

34 LOCATIONS

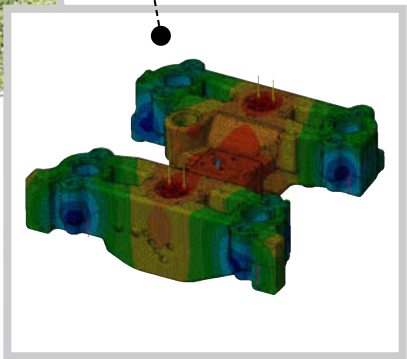
Further information:
Global service brochure



GREENenvironment

// Since the company was founded in 1923, we have manufactured our products exclusively in Lossburg in the Black Forest, a region with the highest density of habitats and nature reserves in Germany. This has shaped us. Demonstrably – because ARBURG was one of the first companies to be awarded triple certification for quality, environment and energy as early as 2012. We are improving our manufacturing processes, thereby reducing our carbon footprint. We are taking the necessary steps to contribute to greater production and resource efficiency. Consistently. \\

Structurally optimised moulded parts: Material consumption and energy-intensive machining work are minimised.



The use of renewable energies is part of our mission: wind power, photovoltaics and geothermal energy are used.

/i/ Further information:
Energy Efficiency Allround brochure

Creating spaces

Innovation is the result of people working together. As a responsible employer, we strive to provide an attractive and inviting production site and workplace. Long-term measures such as our factory bus service and secure parking for bicycles benefit employees and the environment.

Maintaining values

As a company with regional roots, we invest in climate-neutral energies and manufacture our machines in an environmentally friendly way. Moulded parts, for example, are coated prior to processing in order to reduce the number of work steps and to combine them in a way that is as energy efficient as possible.

Growing with moderation

Our production and office buildings in Lossburg as well as our subsidiaries and ATCs are built and operated according to environmental considerations. Natural resources and waste heat from production and machines are utilised.

Shaping the future

We are certain that we can address the global challenges only by working together for the generations to come. We support educational and development programmes relating to technical and scientific subjects.

Award-winning architecture: Buildings designed for the use of natural resources.

Igniting enthusiasm for science and technology: Projects involving kindergartens and schools.

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