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## Functions in their best possible form

Implemented with precision  
by ERNST Umformtechnik

**ERNST**

[www.ernst.de](http://www.ernst.de)

**ERNST**



## For perfect forms, we push it to the limits

### **And sometimes beyond!**

Sometimes, the tiniest detail can make the difference between life and death, for instance when it comes to the safe functioning of an airbag. We have proven time and again that our parts offer safety and precision – right down to the smallest detail. That is the result of development and production processes which have been constantly broadening the spectrum of forming technology for decades. We are now producing items in series that seemed impossible years ago. In order to take these steps forward, our experienced developers have again and again discovered new opportunities at the very limits of what is feasible. This is how we are able to constantly create new, specific formed parts for you, with constantly increasing utility.

**What components would you like us to give new form?**





## Uniquely convincing

### Why ERNST is the right partner for you

Ever more tightly sequenced production processes and ever more complex products require excellent teamwork by all concerned. As a world-renowned development partner to the most demanding clients, we have fully adapted to this premise. From development to high-precision series production, we work with you, our clients, every step of the way. We take your thoughts and requirements on board, add to them with our own ideas and transform them into exacting and high-precision components. With our well-established improvement processes, we are constantly developing better solutions: from optimised design through to new functions, lower weights and saving energy and materials.

**Together, we take your products forward.  
Perfectly synchronised, as your processes require.**



## ERNST's special services

In the development and production of your high-precision formed parts, we lay emphasis on the best technology, constantly optimised processes and highly qualified, experienced staff. Presses with a presspower of up to 1000 tonnes and our laser welding and machining systems offer you a multitude of processing options for your stamped and deep-drawn parts or top-quality assembly units. State-of-the-art further processing facilities complete the added value of our production programme.



## A company with tradition and character

For more than 40 years, ERNST has been synonymous with first-class quality and reliability, complex technologies and processes. We have frequently amazed our clients with our extraordinary innovative solutions from the very first idea to series production. This has shaped our international reputation as a development partner – for even the trickiest problems.



## Committed staff and loyal clients

One of the factors in ERNST's success is the special loyalty within our medium-sized company, with its open and informal way of working. This highly constructive interaction is something we foster beyond the company's boundaries, with our clients across the globe. Many of them greatly appreciate this and have long had close links to the company and the ERNST brand.







# From development to series production

## People you can trust

From the initial enquiry right through to series production, each new formed part goes through a clearly defined process. This gives you security. At the same time, we give our development engineers enough scope to create new implementation ideas. That is the basis for ERNST's exceptional quality. This means that right from designing the first prototypes, we are building in the highest standards for the subsequent series production. We have proved this a million times over. Now let us prove it to you.

### Customer enquiry ▶

- Sales
- Initial feasibility study
- Quotation or estimate



### Design phase ▶

- Simultaneous Engineering
- Design studies
- Simulation
- Rapid Prototyping



### Project management ▶

- Shortened feasibility study
- Prototype construction, using water jet cutting, amongst other methods
- Part function trials carried out by the client



### Putting together a final quotation ▶



### Project management ▶

- Deciding on the procedure, with final feasibility study
- Deciding on the production concepts
  - progressive dies
  - transfer dies
  - deep draw dies
  - special forming dies
- Design
- Tool engineering
  - production facilities (e.g. high-speed milling or CNC technology)

### Sample production phase ▶

- Production of the first samples under series production conditions
- Execution and documentation of Production Part Approval Process (PPAP)
- Client's approval of the sample





# Making use of all the options

## Use our range of services for your series production

As well as our core production skills, our follow-up processes are of increasing importance. We recognised this early on and have constantly increased our further processing, assembly production and global logistics facilities.

Challenge us – in stamping and pressing and everything downstream. We will listen carefully to your requirements – and then impress you with our all-round solutions.

### Production facilities ▶

- Stamping presses
- Transfer presses
- Deep draw presses



### Services ▶

- Progressive die stampings
- Transfer die stampings
- Deep draw stampings
- Special forming processes



### Follow-on processes ▶

- Deburring
- Cleaning
- Fluxing
- Brazing
- Heat treating
- Surface treating
- Machining



### Assembly production ▶

- Assembling
- Riveting
- Tox clinching
- Resistance welding
- Laser welding
- MIG/MAG welding



### Logistics

- Kanban
- Just in time
- Milk-Run
- Consignment processing





## There's a lot of ERNST in that

### Our automotive experiences

ERNST has been established in car-building for decades. In this field, we have put our skills to use many times in the cross-company value-added chain: as an international development partner and a reliable series supplier.

Particular marks of our clients' trust in us include above all safety-critical parts, for example in airbag systems. One thing you can be sure of: we put as much care into producing all of our other parts as we do for safety-critical parts.

*HVAC:  
header for car radiator*

## ERNST in car-building

ERNST's skills are particularly sought-after in these five areas:

- Heating, ventilation and air conditioning (HVAC)
- Power train technology
- Auto electrics/electronics
- Vehicle safety
- Exhaust gas technology



*Vehicle safety:  
airbag diffuser*

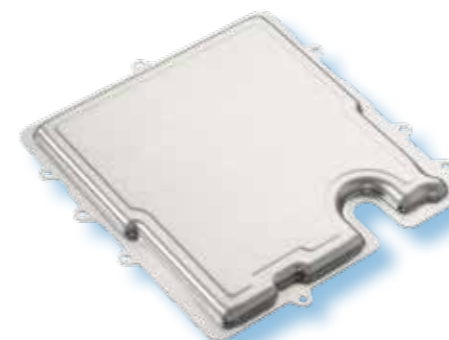


*Power train technology:  
guide tube for car gearbox*



*Power train technology:  
synchroniser ring for gearbox*

*Exhaust gas technology:  
actuator lever for turbocharger*



*Auto electronics:  
cover for control unit*





## Perfect in form across the sectors

### ERNST is represented in many forms

Our reliability, the precision of our metal parts and our passion for exacting individual forming solutions are also highly sought-after by producers of household appliances, electric motors and electronic tools. ERNST products stand for stability and long-lasting quality, whilst affording great flexibility in construction.

What would you like ERNST to get into top form for you?

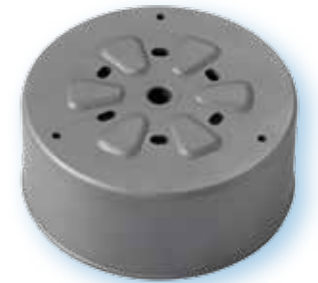
## ERNST in household and electronic appliances

### Control technology

- Housings for control magnets
- Mechanical components for control equipment
- Regulator housing

### Transmission technology

- Motor housings
- Bearing brackets
- Bearing components
- Gearbox housing



*Rotor for fan motor*



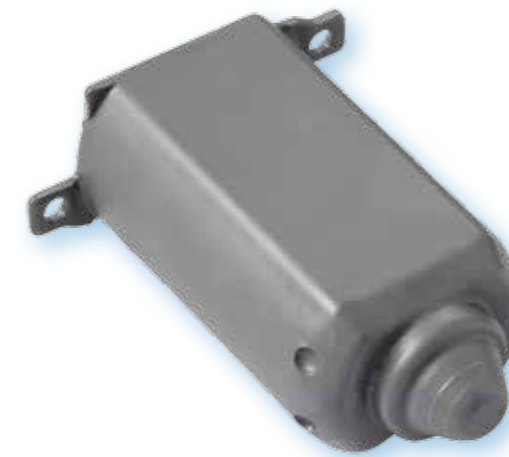
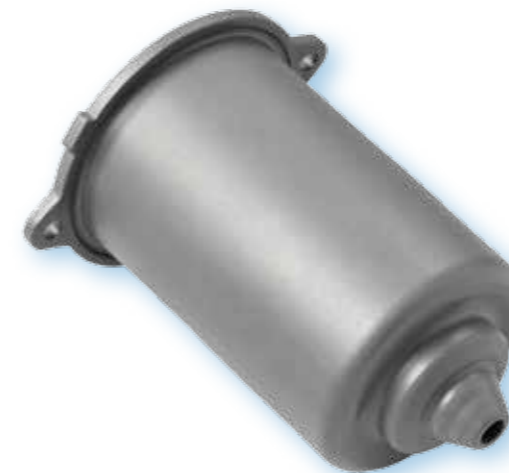
*Bearing bracket for vacuum cleaner motor*



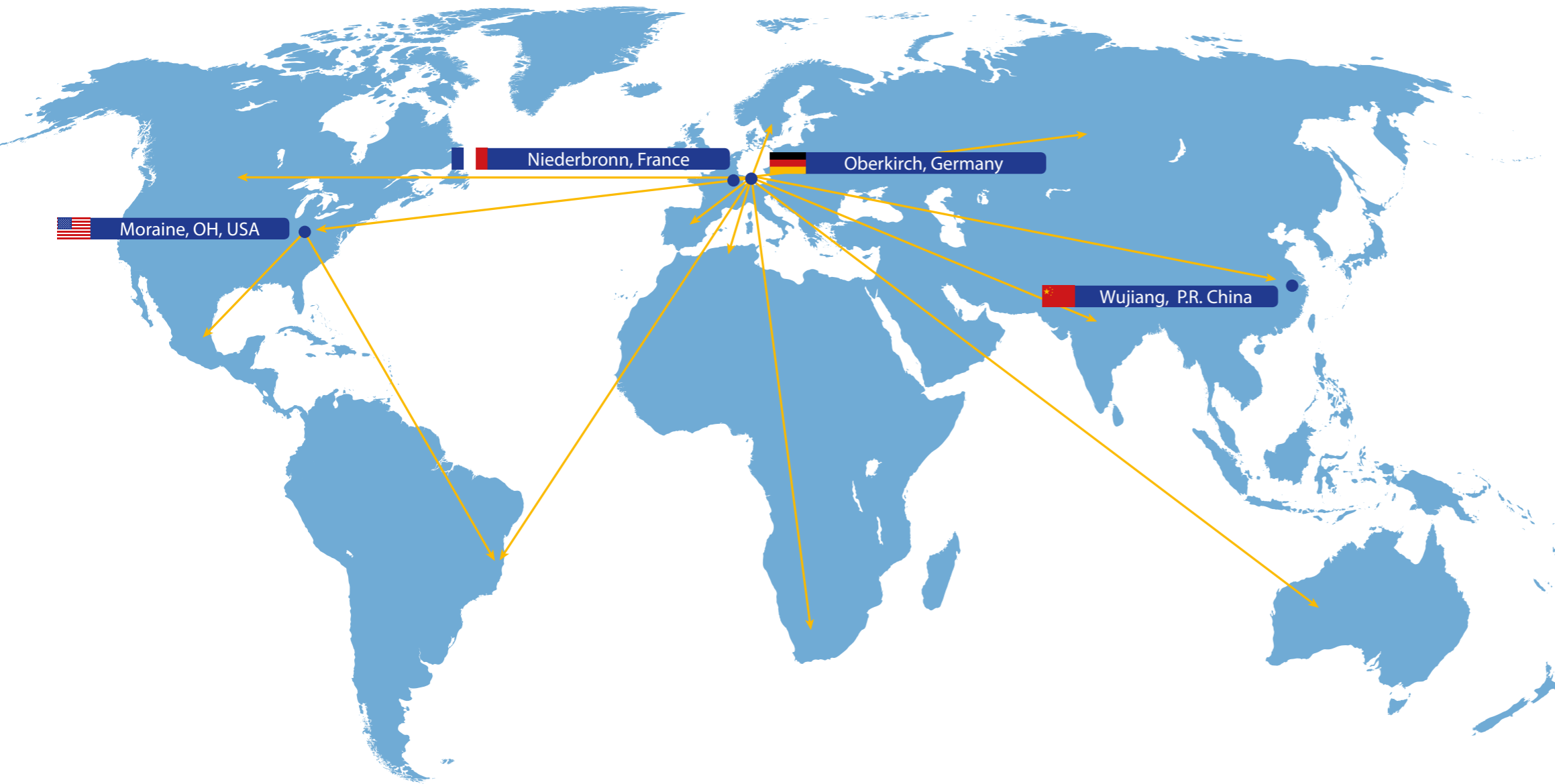
*Rotor for fan motor*



*End shield for e-bike motor*



*Housing for electronic motors*



## Global logistics to the client's requirements

For seamless integration into the global added-value processes of our customers, logistics requirements are closely tied in with our high quality standards. This means that we have a holistic approach to the logistics process: from our suppliers via ERNST's internal logistics, right the way through to tailor-made delivery logistics to our customers.

At the end of the day, it is about making distances disappear, forging close relationships with our customers and generating more added value. That is what we do: every day, all round the globe.

### ERNST tailor-made logistics

- Global processing
- Kanban
- Just in Time
- Milk-Run
- Consignment stocks
- EDI data exchange

## In the Premier League worldwide

### Quality and logistics on a global scale

Worldwide, the ERNST group has a staff of around 650 (as of January 2016) across four sites in Germany, France, the USA and China. At all of its sites, its focus on quality is firmly anchored in the company culture, with the certificates, methods and programmes to prove it. ERNST staff members are regularly trained and are actively involved in the continuous quality processes and checks. For most of them, it goes without saying – it is not because they have to, but because they believe in it.

### ERNST quality standards

- ISO TS 16949
- ISO 14001
- ISO 50001
- APQP
- FMEA
- Lean Management
- AEO







## Innovation by innovation

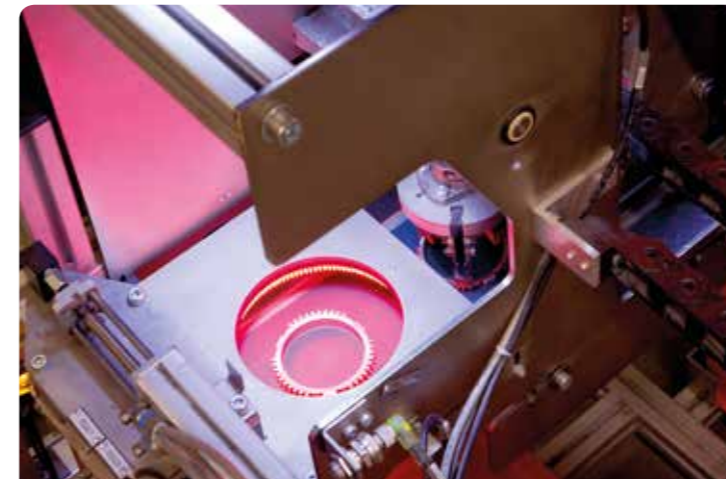
### ERNST commits to future-oriented high-tech processes

Our increasingly complex design facilities and the development of processing procedures mean that ERNST products and services are relevant to increasingly future-oriented sectors and processes. In medical and environmental technology, mechanical engineering and the development of household appliances, new added-value potentials are created with metal parts made from high-strength materials or complex assembly units. Trust your parts to ERNST Umformtechnik's experience and precision – and not just for safety and functional issues.

**We would love to discuss how best to put ERNST's development and production capacities to use for your products.**

## Use ERNST's expertise

- Increasingly complex stamped, drawn and formed parts
- Substitution of cast pieces
- Processing of high-strength materials
- Machining
- Laser welding
- Assembly of complex modules





# Forming the future

## What can we do for you first?

Your product requirements are getting more challenging all the time. This means that solutions are required to best combine functionality, reliability and economy. At ERNST, that is what we are set up to do. For more than 40 years, we have been pushing the boundaries of forming technology.

Now we would also like to help your requirements take shape: the best products technologically, efficiently developed, produced in series, processed and delivered all over the world.

**Set us your challenge.**

**We will be happy to win you over.**



## ERNST advantages in overview

ERNST Umformtechnik is your development service provider and series manufacturer in metal forming technology with a particular focus on stamping and deep draw technology, transfer and progressive tooling and assembly production.

- Well-established processes from the concept to series production
- Top-quality technology and machinery
- High degree of automation
- Highly-qualified and experienced staff
- Outstanding expertise for complex solutions
- Global orientation and logistics
- Further processing and assembly production to your requirements
- More than 40 years of quality and innovation
- Medium-sized company philosophy with a strong sense of identity and personal responsibility
- Continual improvements as everyday company culture



*„Let us form your future together“  
Matthias Ernst and Herbert Gieringer,  
Managing Directors of ERNST Umformtechnik*



### Talk to us now about your global ideas and requirements

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