





















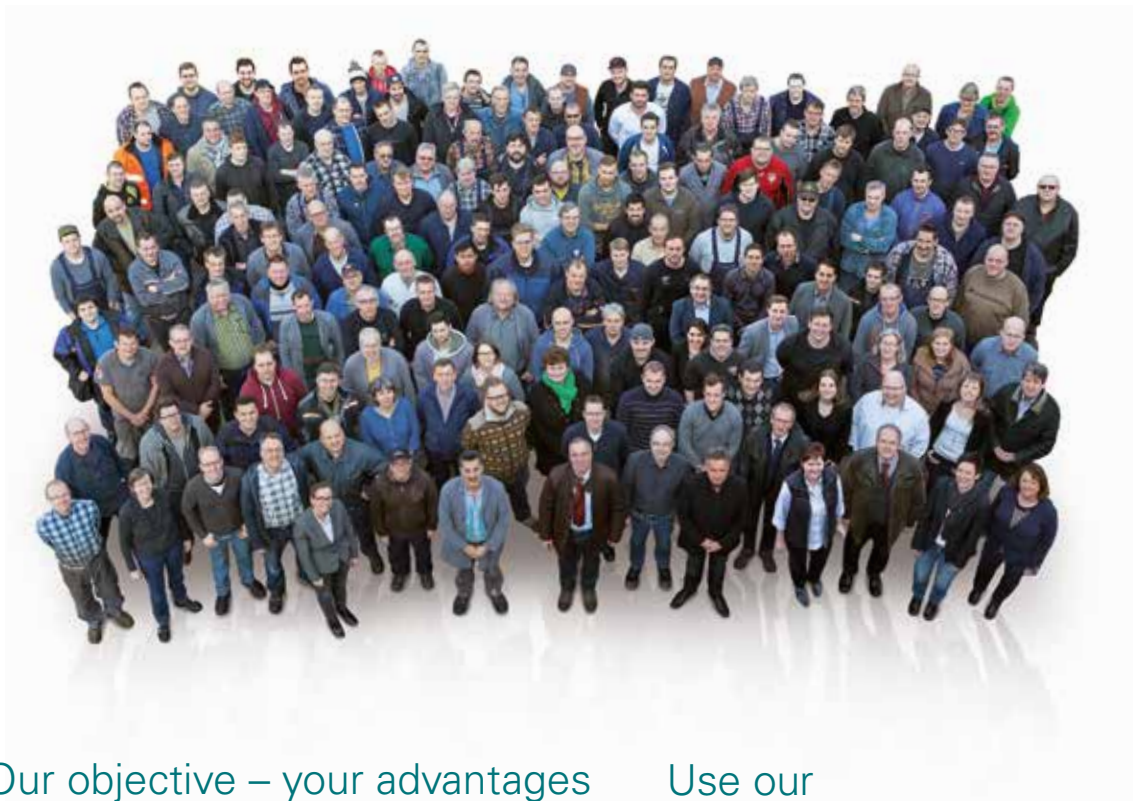
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About JDT – More than chain

Since 1819, we at **JDT** have been passionate about top product quality '**Made in Germany**', including the power to innovate, maximum performance, availability and customer-oriented service in all areas of business. For almost two centuries, JDT has been improving production processes and products with new ideas and groundbreaking inventions - always for the customer's benefit. Today, with approx. **220 qualified employees** on premises covering 40,000 m² JDT is a leading manufacturer of complete chain systems and accessories for mining and industry as well as a system integrator of robots in the field of industrial automation.

The foundation of the quality of JDT's products is a knowledge of materials and production expertise going back almost 200 years. We will be investing our knowledge, experience and skill in order to serve our customers in the future as well.



Our objective – your advantages

Benefit from and experience our broad production depth under favourable economic conditions. Upon request and, depending on requirements, we can consult you on-site and provide you with support in design and manufacturing, through to the assembly and final inspection of your partial and finished products.

We will take on your challenges related to **single, small and series production**. We are your partner in the **implementation of your startup ideas** from the design stage, prototypes and serial production through to sales. Let us know your requirements.

Benefit from decades of international experience and contacts in the fields of technology and commerce. We have motivated and competent employees available who – in addition to German – speak seven **other languages (English, Russian, Spanish, French, Chinese, Czech and Turkish)**.

Use our range of services for you:

- contracted manufacturing
- extended workbench
- design
- material testing

Forging technology

The in-house forging division covers the production of die-forged parts made from all forgeable steel qualities, with a blank weight of 0.2 kg to 15.0 kg. **Material diameters between 20 and 100 mm** can be processed. Deviating cross-sections are possible upon request.

Four complete forging and pressing units with state-of-the-art heating systems are available for the aforementioned range of services. Individual and **special parts can be produced in the open-die forging process.**

The necessary dies and tools can be produced at JDT. The possibility of different heat treatment methods as well as in-house mechanical processing upon request, round off your requirements.



Cutting technology

Our cutting technology department has an extensive fleet of machines for the machining of workpieces. Among other things:

- **lathes**
for **material insertion up to Ø 440 mm and lengths up to 1,200 mm** with powered tools, for axial and radial machining, serial production of small parts through to the feeding of rods.
- **mill centres**
with a **table size up to 1,016 x 506 mm and piece weights up to max. 600 kg** for machining on 3-axes and with reverse clamping devices.

The work of the department is characterised by the high degree of automation performed by robots in the feeding of workpieces. We are able to support you in the **production of parts and small series production** but also in the high level of development for automation in **large quantities**. The corresponding devices and CNC programs are developed and manufactured in-house.



Toolmaking

The latest machines are used in our toolmaking department, e.g. with the following technical features:

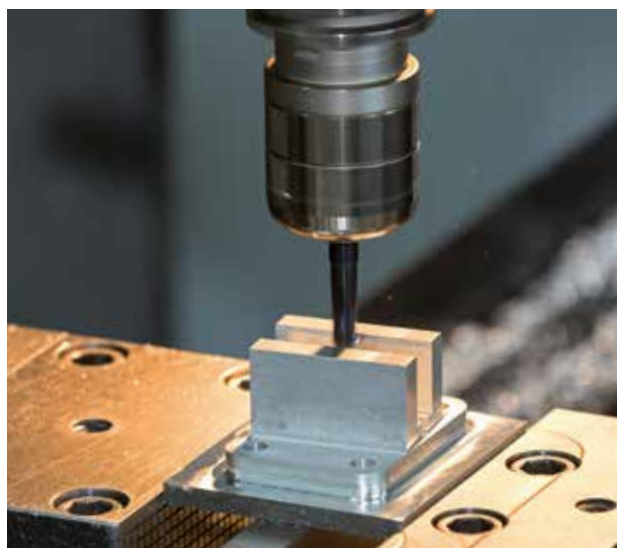
Milling paths

x1,300 mm y500 mm z582mm max. table load 700 kg

x1,035 mm y560 mm z510 mm max. table load 1000 kg

x700 mm y550 mm z500mm max. table load 800 kg

Here, JDT also covers its own tooling requirements. Communication with our **CAD/CAM** system guarantees maximum precision. You will also benefit from our extensive experience for the creation of your own tools.





Material cutting

Bar material

In our shaping machine, materials can be processed with a **max. strength of 900 MPa** and dimensions **up to $\varnothing 115$ mm x 6,300 mm in length**. In this case, material sections can be created automatically **up to 2,000 mm max.** and **individual sections up to 5,000 mm max.**

Burn-cut parts

can be manufactured according to customer requirements from a **max. plate size of 2,000 x 1,000 mm** and a **max. plate thickness of 120 mm**.



Heat treatment

In our heat treatment department, we have the following machines/capacities:

Continuous furnace:

Normalisation up to 950 °C, Hardening in the **water basin up to 950 °C** depending on materials, temperatures and mass, Charging by **pallet max. 1,000 x 1,000 x 350 mm component** size and/or **bulk material max. weight 1,000 kg** per unit.

Tempering:

temperature range 180 °C to 520 °C, bulk material by means of baskets and/or **components 1,000 x 1,000 x 350 mm**.

Soft annealing:

Air-circulating **shaft furnaces up to 680 °C**, **crane capacity up to 5,000 kg** (dimensions on request).



Surface treatment technology

Blasting technology:

Various machines are available for achieving perfect surfaces in follow up processing, e.g. after the forging or hot treatment process, in preparation for further machining, e.g. welding, powder coating, etc.:

- **shot blasting system**
surface 1,000 x 500 mm up to 40 kg
- **blasting system for bars:**
Material diameter from 22 mm to 54 mm and lengths up to 6,200 mm
- **flow blasting**
for guided products with a max. diameter of 160 mm
- **blasting system for loose material**
with a fill weight up to 1,000 kg
- **blasting container 20 feet**
for individual components or serial production

Sharp blasting material is used as standard. As a general rule, filling with other lasting media, to suit the individual requirement is also possible.

Burr removal

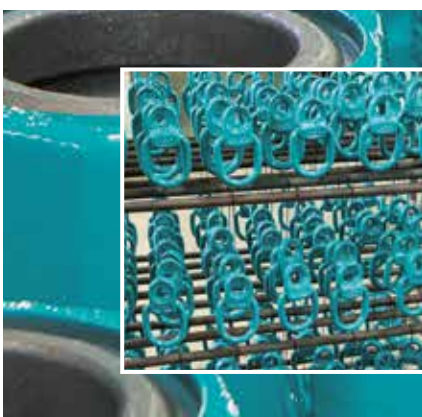
A roller drum system for filling with bulk material up to 4,000 kg max. is available for deburring e.g. parts cut through burning, punched parts etc.

Paint technology/Powder coating

- up to a part weight of 25 kg max.;
- dimensions upon request
- annealing conditions (various temperature ranges can be appointed)
- colour shades can be selected depending on the nature and scope

Protection against corrosion

A dip plant with Tectyl as a solvent-based/wax-based protector against corrosion. Suitable for protecting metal surfaces against corrosion when stored for a long time in rooms, short-term storage outdoors and during road and sea transports. Hardening forms form a brown, waxy, translucent, solid film.



Bending processes

for a **material diameter of 16 mm to 80 mm** with pin lengths of **min. 520 mm and max. 1,400 mm in length at approx. 800 °C.**

In the individual and special part production, **bending processes between 6 mm and 115 mm diameter** are possible with a **max. length of 2,000 mm at approx. 1,200 °C.** Other profiles and lengths are always possible on request.



Wire processing

mechanical **descaling of wire between 6 mm and 21 mm diameter**, wire drawing with coating for further processing e.g. stearates or salts, wire straightening and **cutting (approx. 3 mm to 21 mm in diameter)** with a **strength of 900 MPa max.**

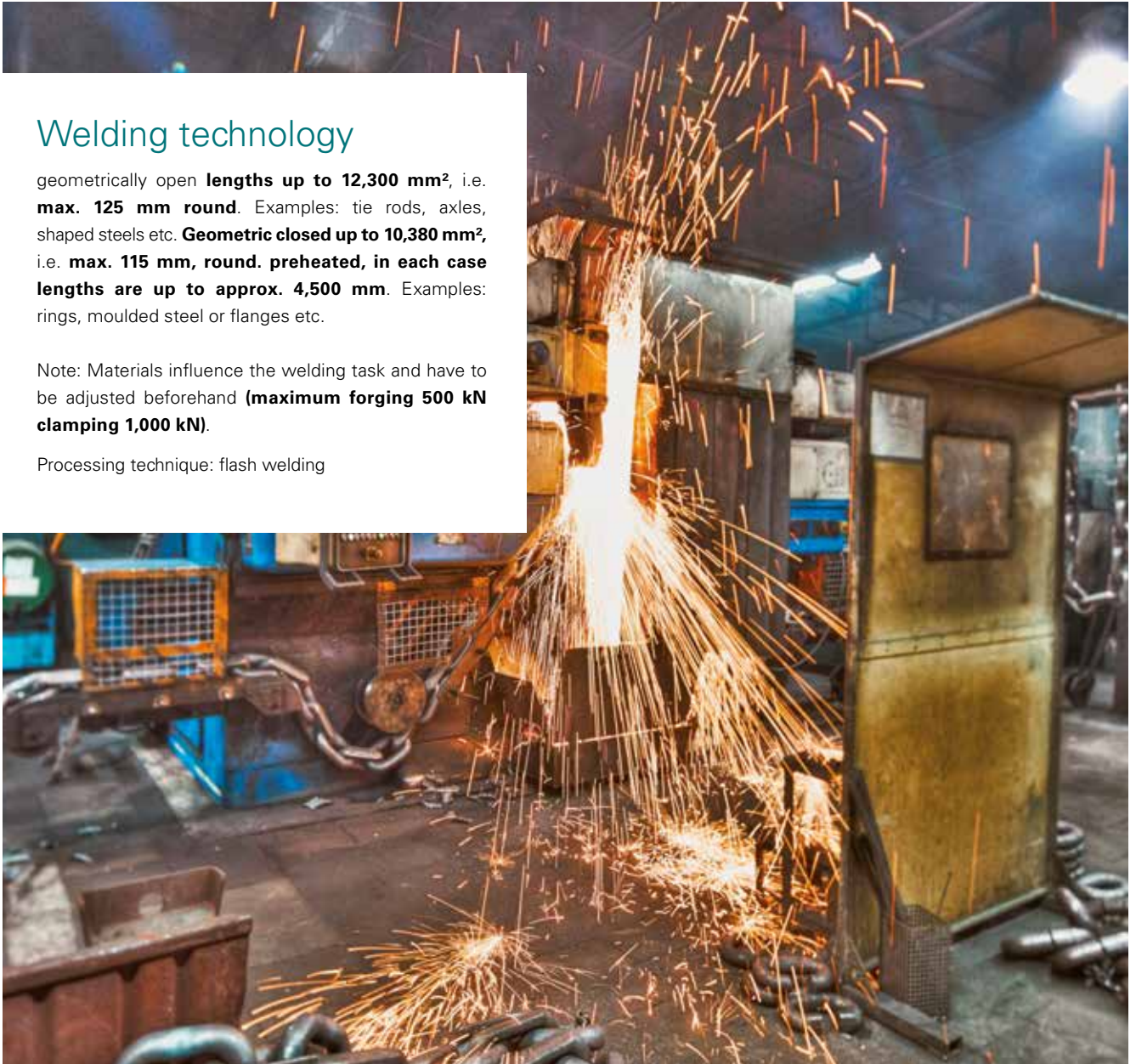


Welding technology

geometrically open **lengths up to 12,300 mm²**, i.e. **max. 125 mm round**. Examples: tie rods, axles, shaped steels etc. **Geometric closed up to 10,380 mm²**, i.e. **max. 115 mm, round, preheated, in each case lengths are up to approx. 4,500 mm**. Examples: rings, moulded steel or flanges etc.

Note: Materials influence the welding task and have to be adjusted beforehand (**maximum forging 500 kN clamping 1,000 kN**).

Processing technique: flash welding



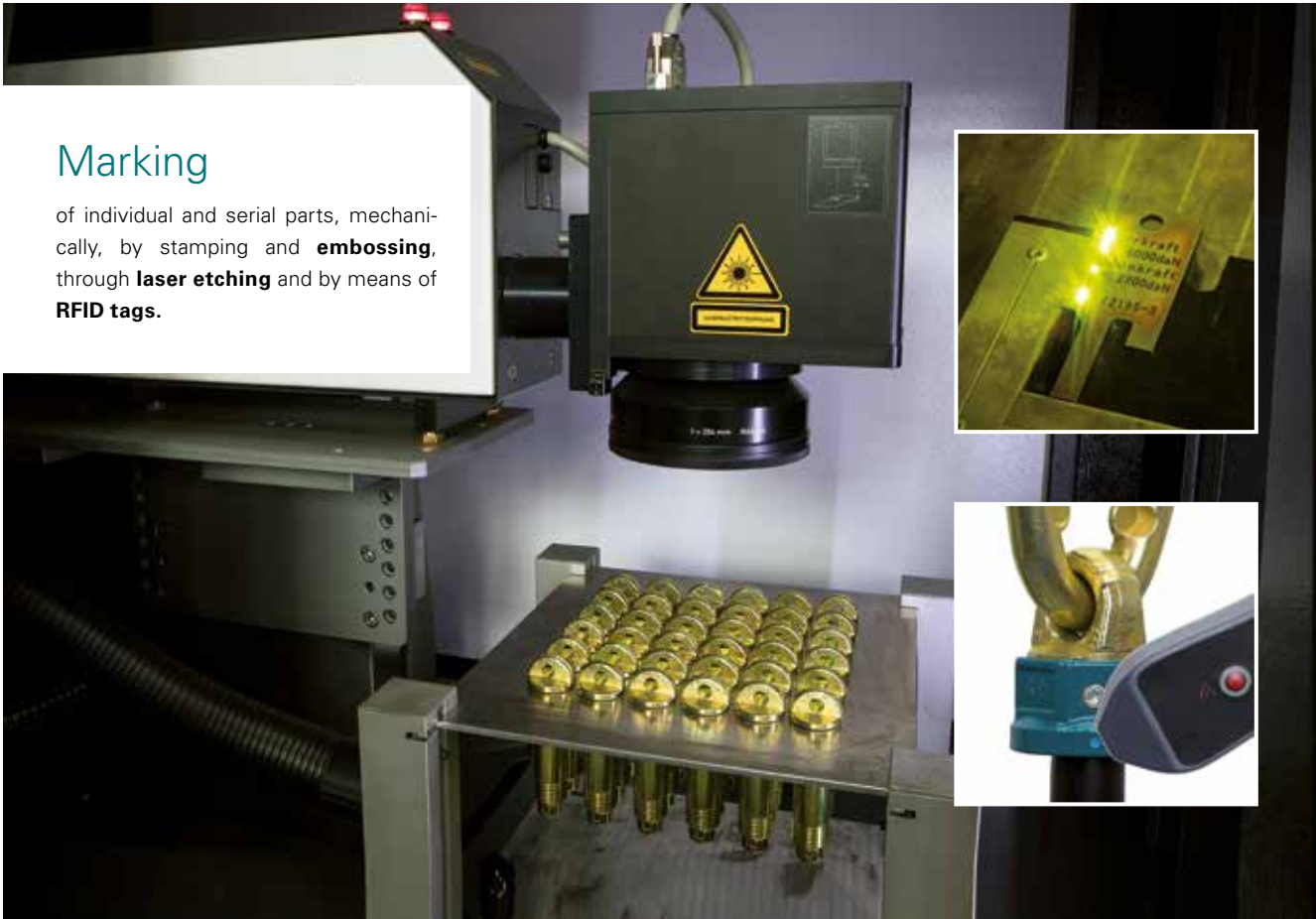
Manual welding

For your individual welding tasks involving MAG welding, we have **ISO 9606-1** qualified welders available for butt and throat seams. Detailed specifications after consultation.



Marking

of individual and serial parts, mechanically, by stamping and **embossing**, through **laser etching** and by means of **RFID tags**.



Automation technology

JDT has applied **industrial automation** in its own production for over 15 years. In part, due to the special requirements at JDT, internally qualified engineers have developed equipment for the company's own industrial automation, in cooperation with the plant managers and employees on site.

Turning, milling, painting, sanding and assembling are the applications that were part of JDT's 'tough' everyday life and which have now been automated. Over the years, experience was gathered which went into the optimisation of the plant. The advantages are obvious - we know our manufacturing processes and workflows as users and manufacturers.

Automation for your manufacturing

These installations have not only proven themselves for JDT but have helped to build a strong external customer base. We are convinced that we are able to **offer you a suitable solution. We are able to advise you in the planning and development of your company.**

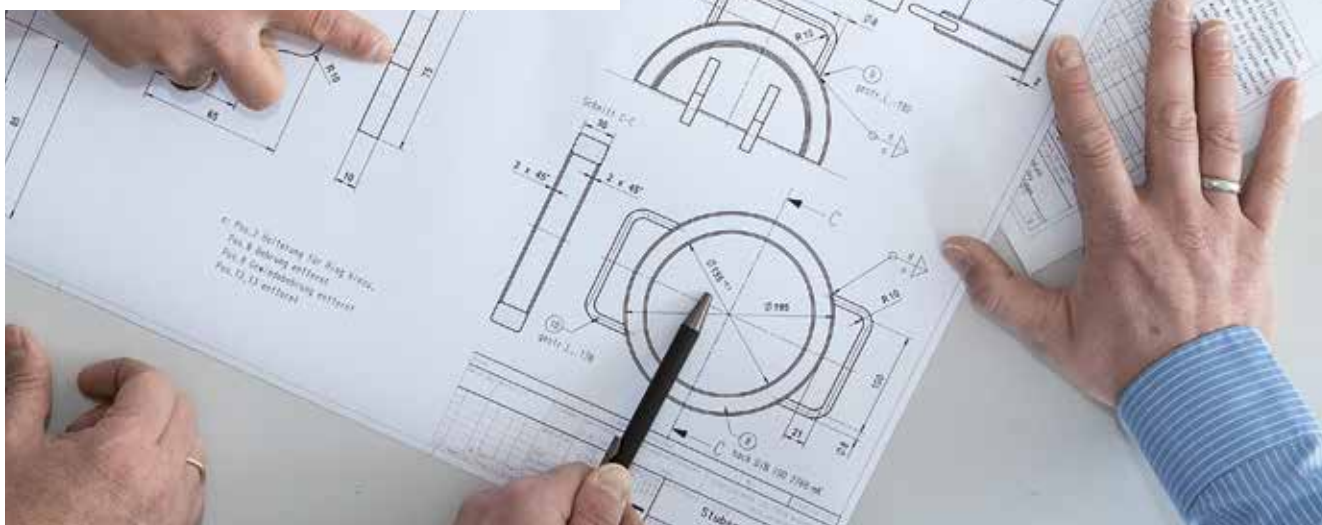
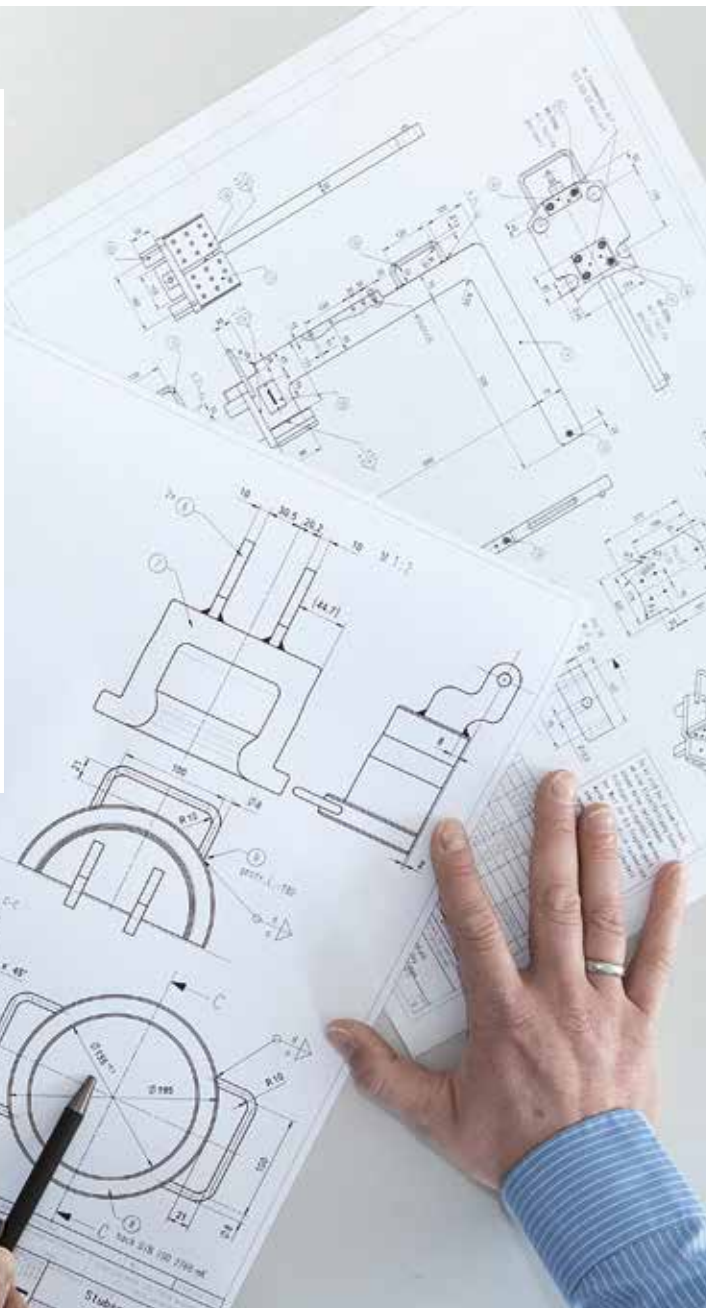
Assess the operating conditions and possibilities at JDT on site and use our **expertise for your own company.**



Design

Design has a high priority at JDT. Through continual innovation, product development and further development are the focus of the department's activities. It forms the basic prerequisite for the creation of tools and ensures an efficient and smooth production process. Design is supported by up to date and compatible **CAD/ CAM 3D software** with integrated, leading technological functions for product design, construction, simulation and production

Our experienced team of designers and engineers is also available to solve your problems and realise your projects. We accompany you in the implementation and further development of your products whether this relates to individual, small scale or serial production and are available as business associates, for the **implementation of your startup plans.**



Material testing/ Quality assurance

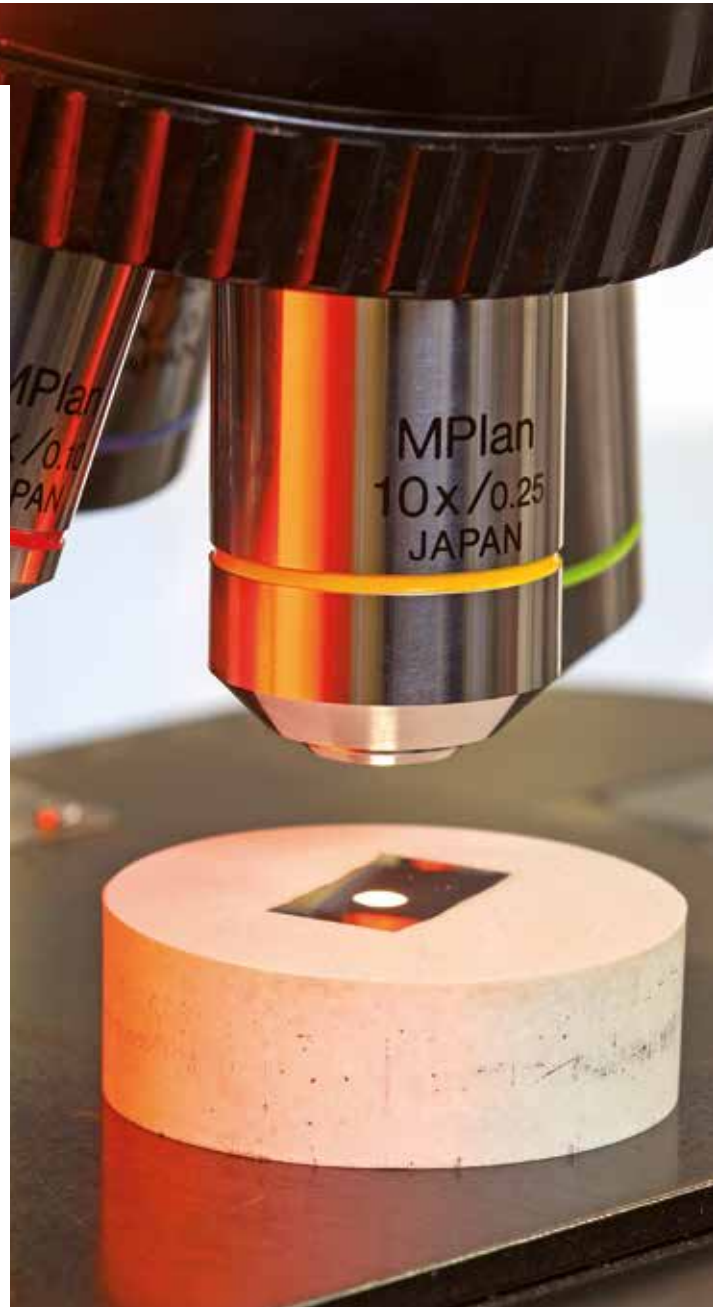
Quality must meet the highest requirements. That is why we align our quality standards to the expectations and views of our customers. The result is a **quality management system that has been consistently applied for years**, and has been certified according to ISO 9001 since 1994.

Through the modern methods and tools of preventive quality assurance, we avoid errors before they occur.

Our services in the field of material testing:

- **tensile tests** (component tests) 2 - 5,000 kN
- **tensile tests** in accordance with DIN EN ISO 3892 (shoulder - head samples)
- **bending tests**
- **fatigue tests** up to 600 kN highest load
- **notched bar impact tests** up to 50 / 300 J, to - 60 ° C
- **analysis** of low alloyed steels and tool steels (OES)
- **hardness test:** HB / HV 0.2 - 10 / HRC / mobile in accordance with Leeb
- **roughness depth measurement**
- **ZFP method:** magnetic crack detection and colour penetration testing
- **reflected light microscope** up to 1,000-fold magnification with image documentation
- **stereomicroscope** up to 63-fold magnification with image documentation
- **metallographic preparation**

Of course you will receive the corresponding documentations for examinations which we have carried out for you.



Plastic technology/ Wet process technology

We also offer the services of an affiliated company based in Schwerte, which has been established in the field of plastic processing since 1965.

Since 1982, the accumulated expertise of this company has led us to concentrate on the production of **high-quality wet process** equipment, within the scope of increasing specialisation. The company has modern production facilities spread over a production area of 720 m² of with **an integrated clean room (approx. 80 m²) according to class 4 of ISO 14644-1** (class 10,000 US Federal Standard 209e). The company has its own development department, trained staff, effective processing technologies and an efficient quality control system focussed on plastic and wet process technology.






Complete solutions from one source.



We can do a lot of things ourselves, but not everything ... however, in such cases, we have experienced professionals who are in contact with a sustainable, reliable and qualified group of suppliers. Thus we are able to implement the **specific requirements**, which we cannot fully complete by ourselves, into a **complete solution** to your full satisfaction.

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and what else...

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... please visit www.jdt.de.

