



**CHIEF PHYSICIAN TREATMENT
FOR YOUR SPINDLE**

COMPETENCE WITHIN 2,700 m²

Our new Spindeldoctor Home service has been in existence since 2015. In the heart of Europe, we have been working within 2,700 square metres with 100 employees towards our customers' success. Together we can draw on over 600 years of professional experience, over 22 years of experience in the customer service of machine tools, and expertise of in excess of 2,500 repaired spindles.

Our expertise in spindles is universal and includes repair, maintenance and conversion or optimisation. We also clearly commit to Germany as a business location and see our company in Naumburg in northern Hessen in the future.

 **EGIN-HEINISCH**
THE SERVICE COMPANY
Henschelstr. 8a
34311 Naumburg
Tel.: 05625 9210-0
Mail: care@spindeldoctor.de
Website: www.spindeldoctor.de

Our new **Spindeldoctor Home** in 34311 Naumburg, with an area of 2700 m² for production and administration. We are very connected with our base in northern Hessen and proud to have created 100 jobs in **Germany**.



2016 group photo, with some of our SpindelDoctors from the Management and Technology departments.

WE ARE **THE SPINDELDOCTOR**

Many of our employees become Spindel Doctors. What do we mean by this? Quite simply that we have made the wishes and concerns of our customers our top priority.

We are motivated and passionate. Day after day, hour after hour we work together harmoniously as a team and with a spirit of partnership, and complement each other.

HAND IN HAND FOR MORE QUALITY

The future belongs to team players. This is why, at the moment, we have such a healthy mixture of experience and youthful vigour as well as a thirst for knowledge. Some of our work is independent of time and location, which requires special logistics.

We have sophisticated internal knowledge management and learn from each other and from our tasks. The result is top quality standards, both for our “chief physicians” and for our team.



Aslan Karahan, Wolfgang Heinisch



Group photo of Recruitment Days 2016. Chief Accountant Tatyana Leventhal with Eduard Krieger and Pajtim Jahaj.



Assembly plant in Naumburg, with underfloor heating and cooling to achieve optimum room temperatures.

INSIDE SPINELDOCTOR

The heart of our technology centre consists of 800 square metres of assembly area and 700 square metres of production area, which is heated and cooled with energy efficient flooring. All the workstations are perfectly organised and ergonomic, and repair processes are clearly structured and optimised.

Excellent framework conditions for a first class product.

WHY WE DO WHAT WE DO

Spindel doctors love what they do. Our profession is our vocation, our tasks challenges. We strive for perfection and see quality as our greatest asset.

This starts with the small details of daily cooperation and the right work setting. Without enthusiasm it is "only" work, but thanks to our enthusiasm it is significantly more than that ...



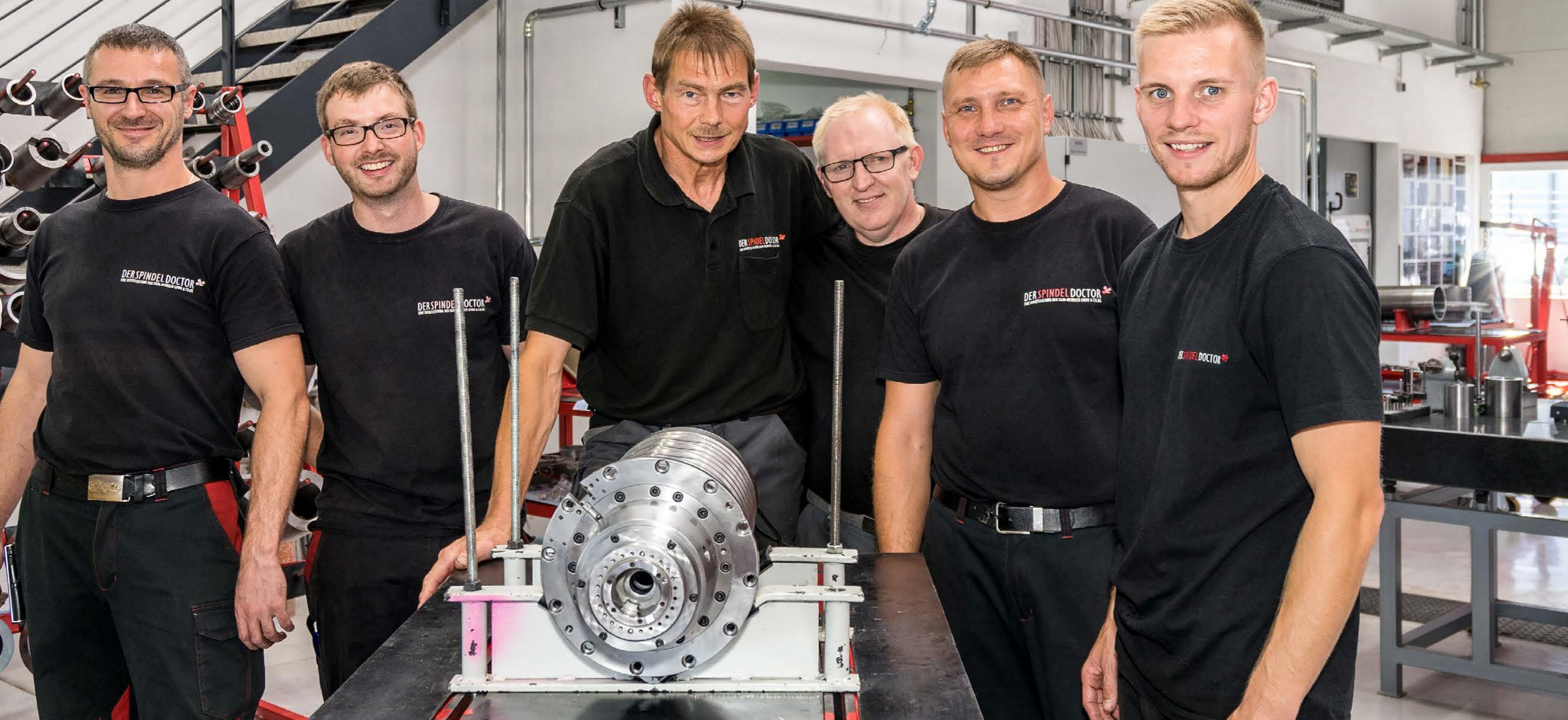
CEO Berna Egin-Heinisch



Charles Hope Gregory



Eduard Krieger



OF SPINDLES AND FUN

We mean it sincerely, and argue that working with spindles is fun. Especially when clients are satisfied and we have exceeded ourselves once again.



FAST ON-SITE VISITS

Of course, Spindeldoctor also carries out on-site visits. We will happily examine your spindle on your company premises and carry out a comprehensive on-the-spot spindle check. In addition, we carry out disassembly and assembly, overhaul machine geometry as well as the restoration of all associated functions and their maintenance.

Your advantage: our "Spindle plant" is located in a convenient and central location in the Kassel region. This way we are able to reach our clients across the whole country in just a few hours.

In terms of logistics, we mostly rely on our own vehicles and specially trained drivers and mechanics.

Our SpindelDoctors are perfectly equipped and able to tackle any problems arising from our customers - including small repairs - at any time. This is where experience and our year long training programme count.

ON SITE THERE FOR YOU

With Spindeldoctor, it goes without saying that the removal of your defective spindle takes place on the actual machine and we take care of the installation including the areas of kinematics and spindle geometry.

We are only satisfied once your machine is working properly again and within our strict reference values. We often even improve on the previously achieved values.

We achieve our high goals through numerous test runs and uncompromising thoroughness.

We call it chief physician treatment.



Clamping force test on a Mikron VCP 710.

OUR HISTORY

2003 2 EMPLOYEES

Our formation: "Egin-Heinisch the Service Company" was born.

2004 4 EMPLOYEES

There are already four of us. Four of our employees are dedicated to the special Servicing of Deckel Maho machines.

2005 4 EMPLOYEES
1 SPINDLE REPAIRS

Our first spindle repair on a "DMU 125 P". We are proud of our success and have learned a lot from it.

2006 4 EMPLOYEES
45 SPINDLE REPAIRS

We are making progress. Construction of the first spindle repair Workshop in Naumburg. There are still four of us, but have already repaired 45 spindles.

2007 20 EMPLOYEES
2008 60 SPINDLE REPAIRS

We became "Spindeldoctor". We are demonstrating our independence and vendor independence with the development of the brand. We have had 60 successful spindle repairs and have 20 employees.

2009 45 EMPLOYEES
2011 450 SPINDLE REPAIRS

How time passes. We now have 45 employees. High time for the move to our assembly centre. 1,000 square metres in Naumburg. With the Alsdorf subsidiary, we founded the Competence Centre for the maintenance and repair of CYTEC Spindles, and our customer service organization for the Europe-wide removal and refitting of the spindle units is inaugurated.

2015 90 EMPLOYEES
2016 1.200 SPINDLE REPAIRS

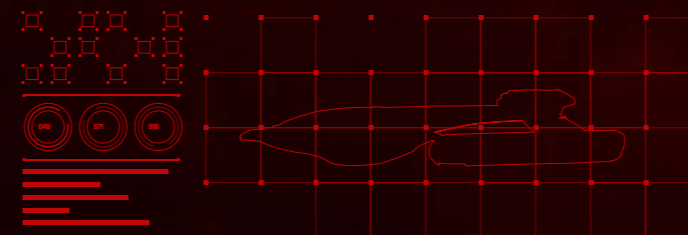
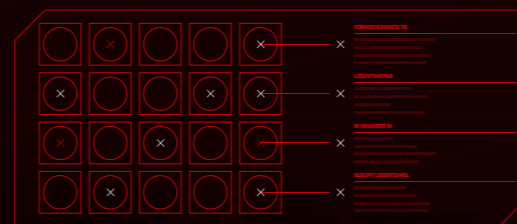
With Spindeldoctor Home, our new Home is in line with low energy standards. In addition we have opened a new Customer Service centre. In the meantime, more than 90 people work for the Spindeldoctor, and we have obtained ISO certification.

2012 55 EMPLOYEES
2014 820 SPINDLE REPAIRS

We carry out disassembly in two shifts. Assembly and production 18-hours per day, every day. Our goal is a complete repair service internally from five working days. We also run a successful "shaft rescue system for spindles".

2021 285 EMPLOYEES
10.000 SPINDLE REPAIRS

We continue to be ambitious and set ourselves high goals. Our Announcement: in 2021, the site in Naumburg will overhaul 10,000 spindles. You can rely on us!



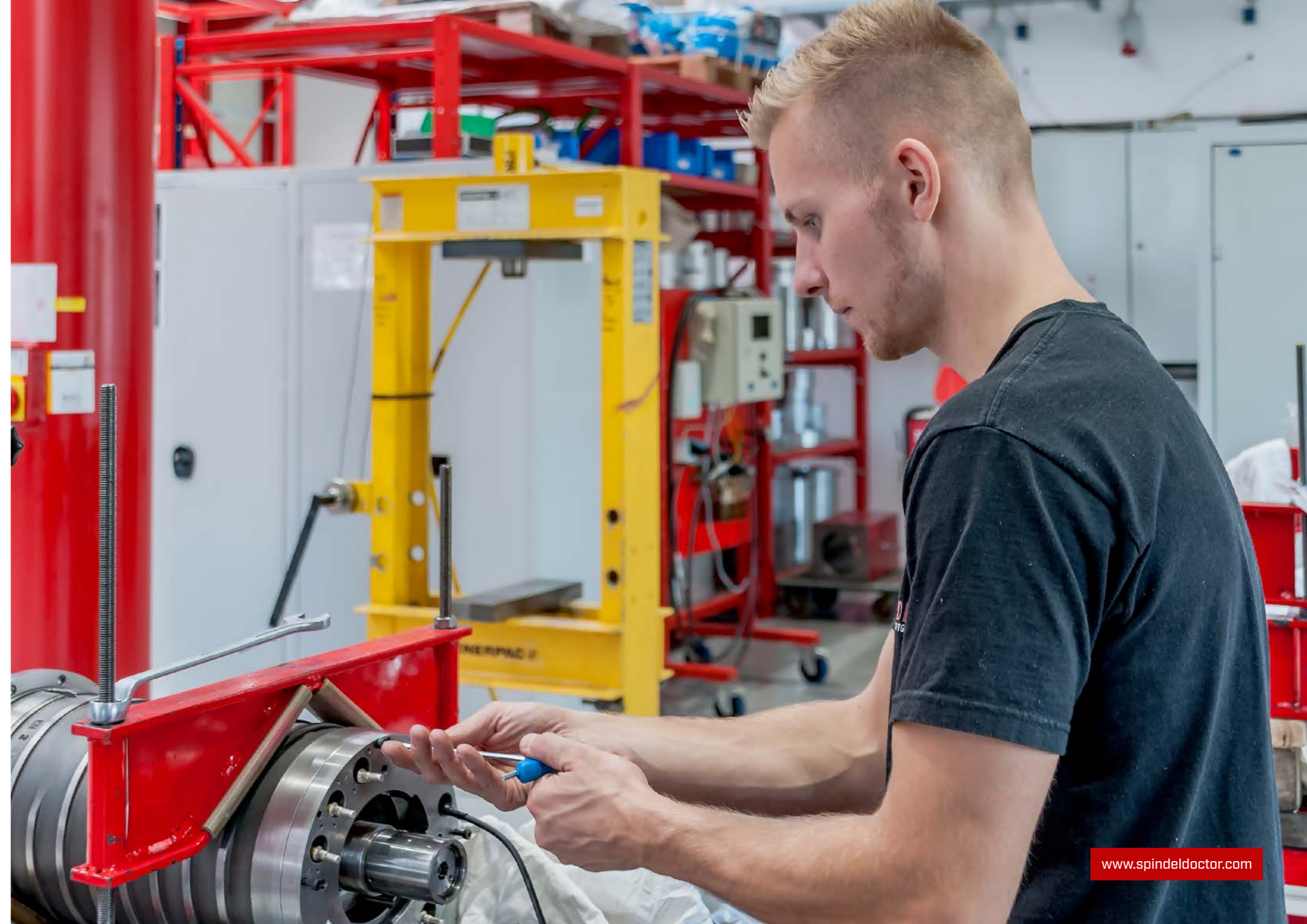
GERMAN WORK VALUE

Work as a Spindeldoctor is an art in the classical sense. Fitting, repair and dismantling require the finger-tip sensitivity of a surgeon and maximum confidence in our Spindeldoctor.

For us, thorough training, "Made in Germany" and the highest quality standards go without saying.



Vitali Naumann, head of Pre-Assembly and Internal Quality.

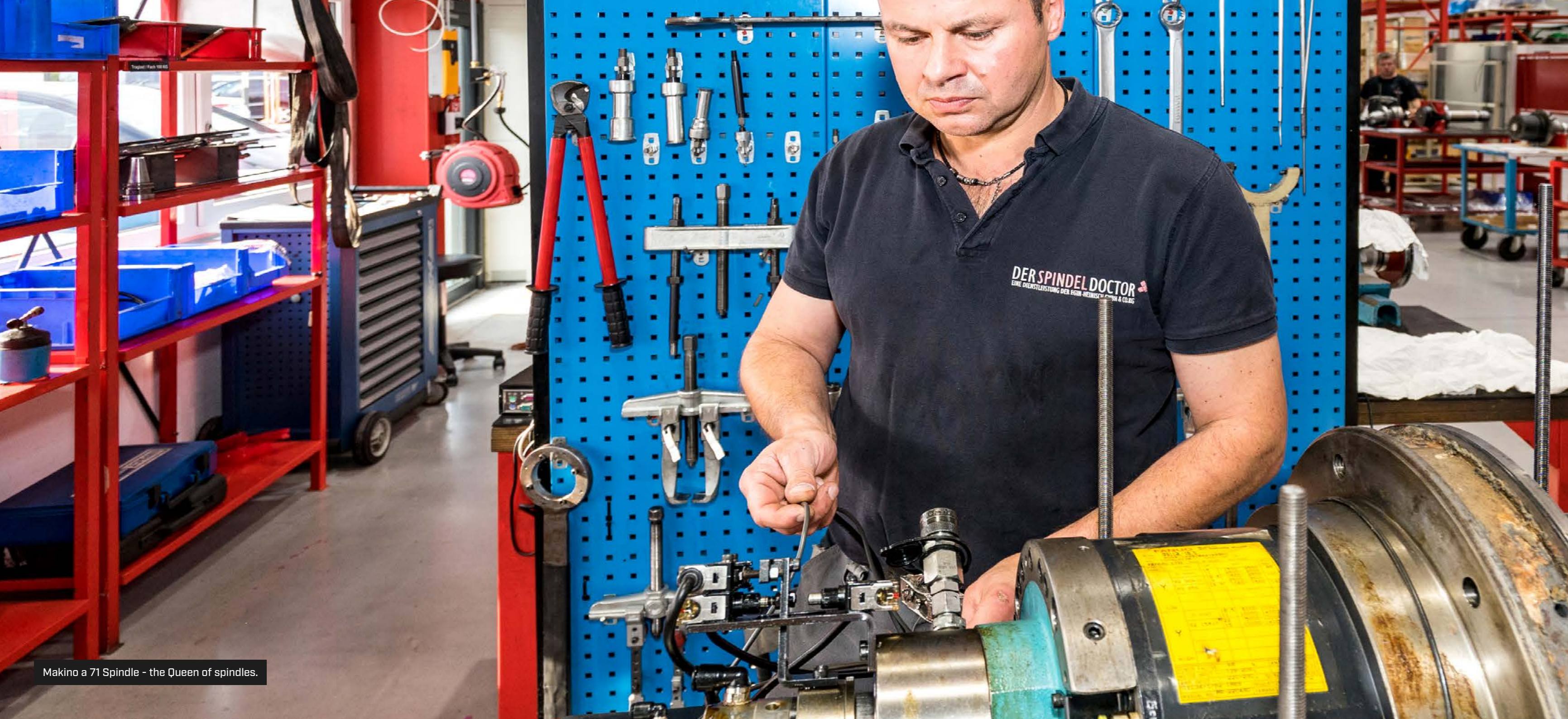




WELCOME TO THE [DIS-]ASSEMBLY

You may have noticed that we have no waiting room. This is because you are very important to us. This is why you go straight from the check directly into the OP, where one of our Spindel doctors is waiting. Their technical, electrical and mechanical evaluation takes place.

Then it's time for work. A veritable marathon of up to 14 hours of disassembly, but we learn as we whip you back into shape. Your owner receives a detailed service report, including an extensive analysis as the basis for the repair.



Making a 71 Spindle - the Queen of spindles.

DER SPINDEL DOCTOR 

(DIS-)ASSEMBLY

The disassembly of your spindle is team work. Together, we determine the cause of failure of your spindle and set up the master spindle to restore the original manufacturer properties.

To us, disassembly does not only mean the removal of the defective spindle, but also the processing and maintenance of all derived information in the form of our Premium Spindle Report. Hence each division knows exactly what to do.

Our assembly can be quite accurately described as 'the heart, the core or centre of our spindle plant'.

Here we agree on the bearing pre-load and assemble the individual modules in accordance with the specifications of the spindle manufacturer.

Then it is checked, tested and evaluated, so that we can comply with our twelve month warranty agreement.

FINE TUNED

Bearing tuning requires our surgical Spindeldoctor skills. This starts with a comparison between the old bearing set and the determination of the bearing design and continues in the definition of the pre-load. Ideally, we work with the same types of bearings as those used by the spindle manufacturer.



Measuring the bearing set height to fine-tune the pre-load.



Calibrating the measuring equipment.



MEASUREMENT TAKEN

We are measuring with calibrated equipment. And we always have room temperature in view. A variation in temperature of just 10°C will cause a deviation of 2 µm on the component. Too much, we find!

Our solution consists of continuous measurements of the spindle, the shape of the spindle and the bearing tolerances. We continuously hone our measurement techniques. We also calibrate and compare our measuring devices on a regular basis. Micron accuracy.

TO THE **EXACT** μm

Our measurements depend on the measuring instruments used. In our case, these are a new 1.20 metre FARO gauge arm, a TESA measuring machine and hand measuring equipment, also by TESA and MAHR. Top quality for first class work.

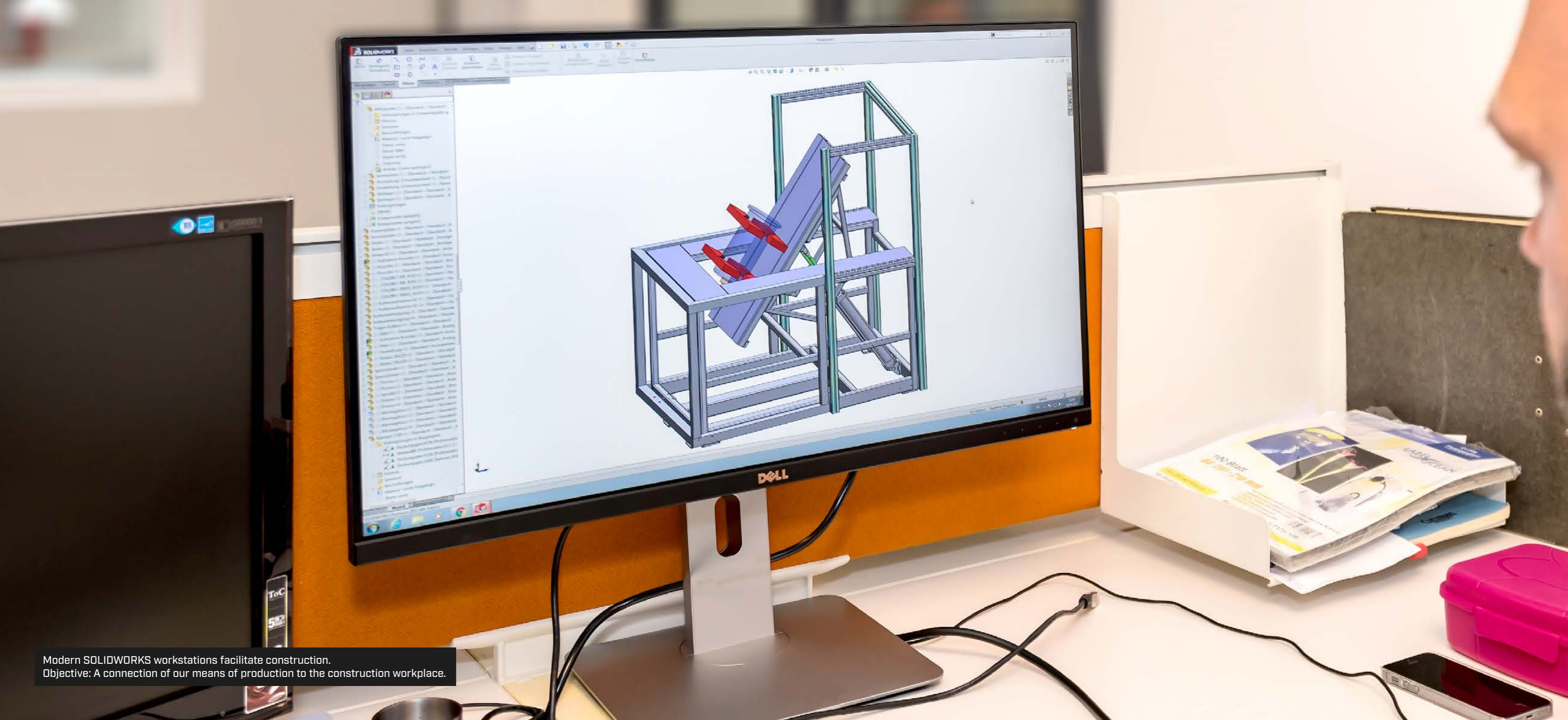
It must fit, otherwise the spindle is not approved. This applies both to the bearing seats as well as the inside contour of the shaft, the cone and the bearing plates.



FARO 3D measuring arm.



TESA measuring technology 3D measuring machine.



OWN DESIGN PLAN, DRAW, CONSTRUCT

Of course, we provide the exact design of your old or new spindle. Throughout each spindle repair, measurements are recorded, in order to continuously improve and optimise our repair process. By utilising samples or drawings, we manufacture precision assemblies for defective spindles. With our own production, we clearly emphasise and are in the position to produce anything that needs to be re-manufactured.

Modern SOLIDWORKS workstations facilitate construction.
Objective: A connection of our means of production to the construction workplace.

OWN PRODUCTION **CNC MILLING MACHINES**

In our CNC Mill, we manufacture the parts that we require for the repair or optimisation of your spindle. With pinpoint accuracy and the highest possible precision.

CTX 420 linear
GILDEMEISTER

Drehmasch

CTX 420

Baujahr 2003

02260002711

Gildemeister CTX 420 linear, CNC-controlled multi-axis turning machine for our small series.



Micron VCP 710 high precision processing centre.

OWN PRODUCTION **CNC MILLING MACHINES**

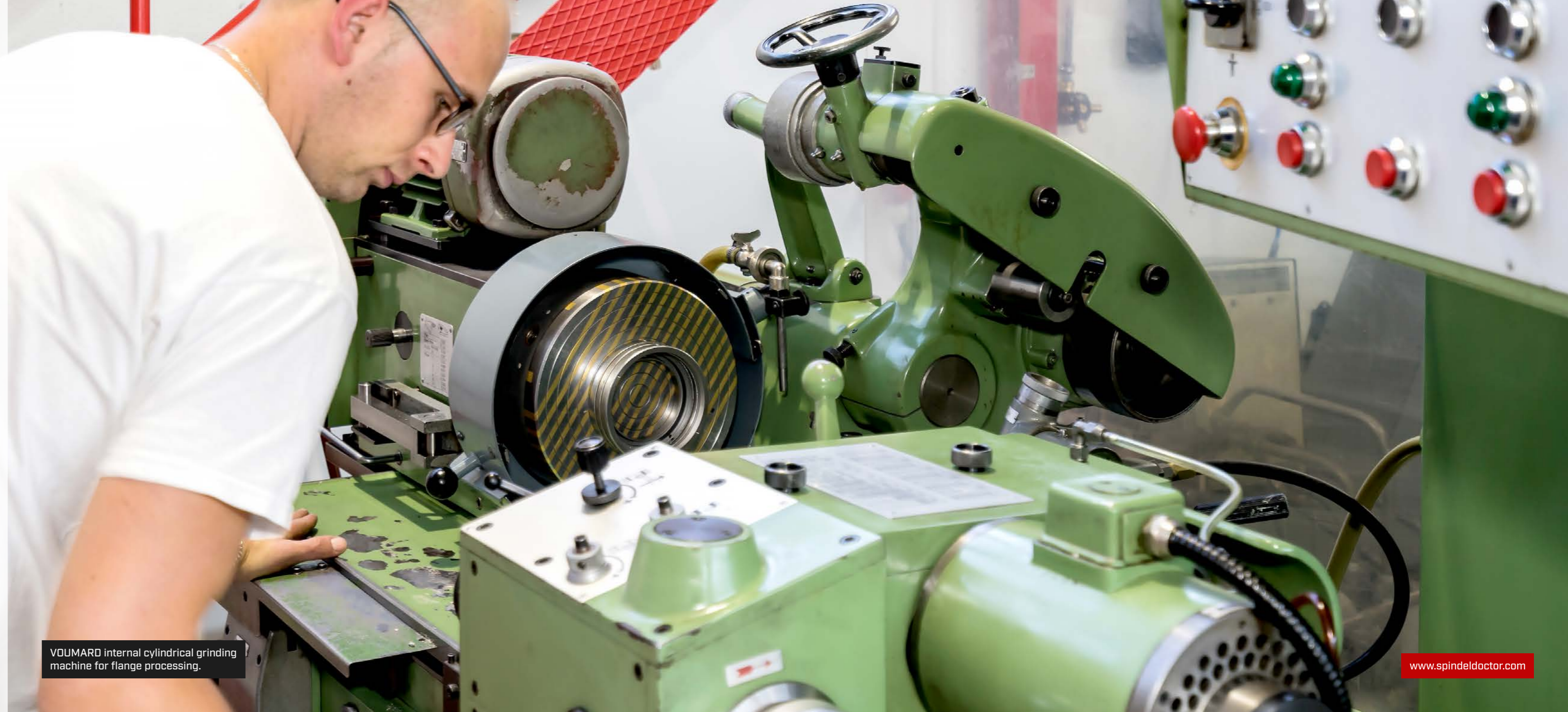
What doesn't fit is made to fit. In our CNC milling department, we create components precisely in accordance with the specifications of our customers.

Or work with own constructions, which serve to improve their spindle.

OWN MANUFACTURING **GRINDING**

In our grindery, we carry out fine-tuning and ensure the perfect fit of each individual component. We are uncompromising and notice every μm .

We work with eight precision grinding machines by the manufacturers Kellenberger, Studer, Schaudt and Voumard with grinding lengths of up to 1500 mm.



VOUMARD internal cylindrical grinding machine for flange processing.



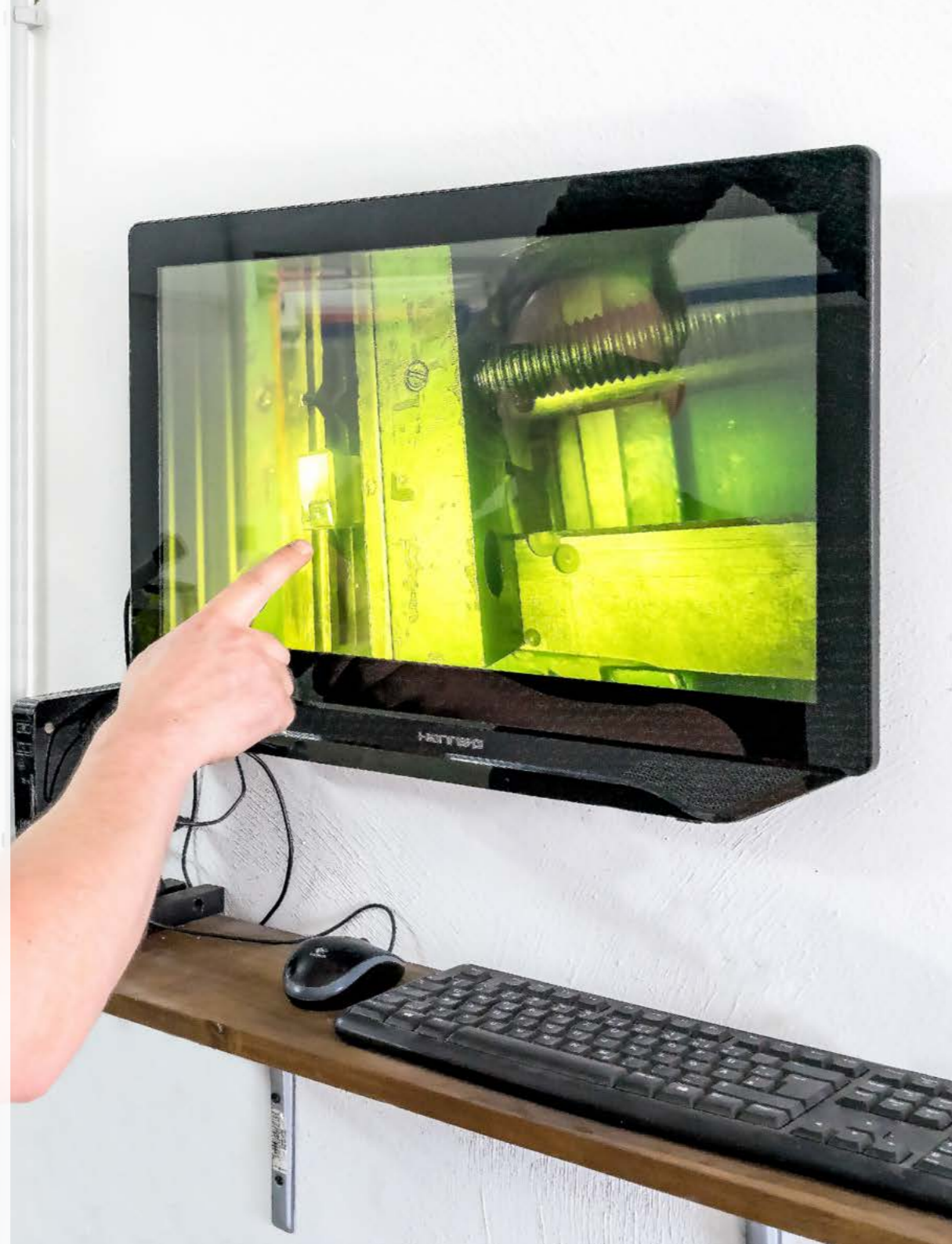
OWN MANUFACTURING GRINDING

Turning is carried out both in the conventional and controlled ways. Our devices cover diameters of between 50 and 600 mm and lengths of 100 to 1,500 mm.

Böhringer DUS 560 x 1500 mm.

UNITED FOR LIFE

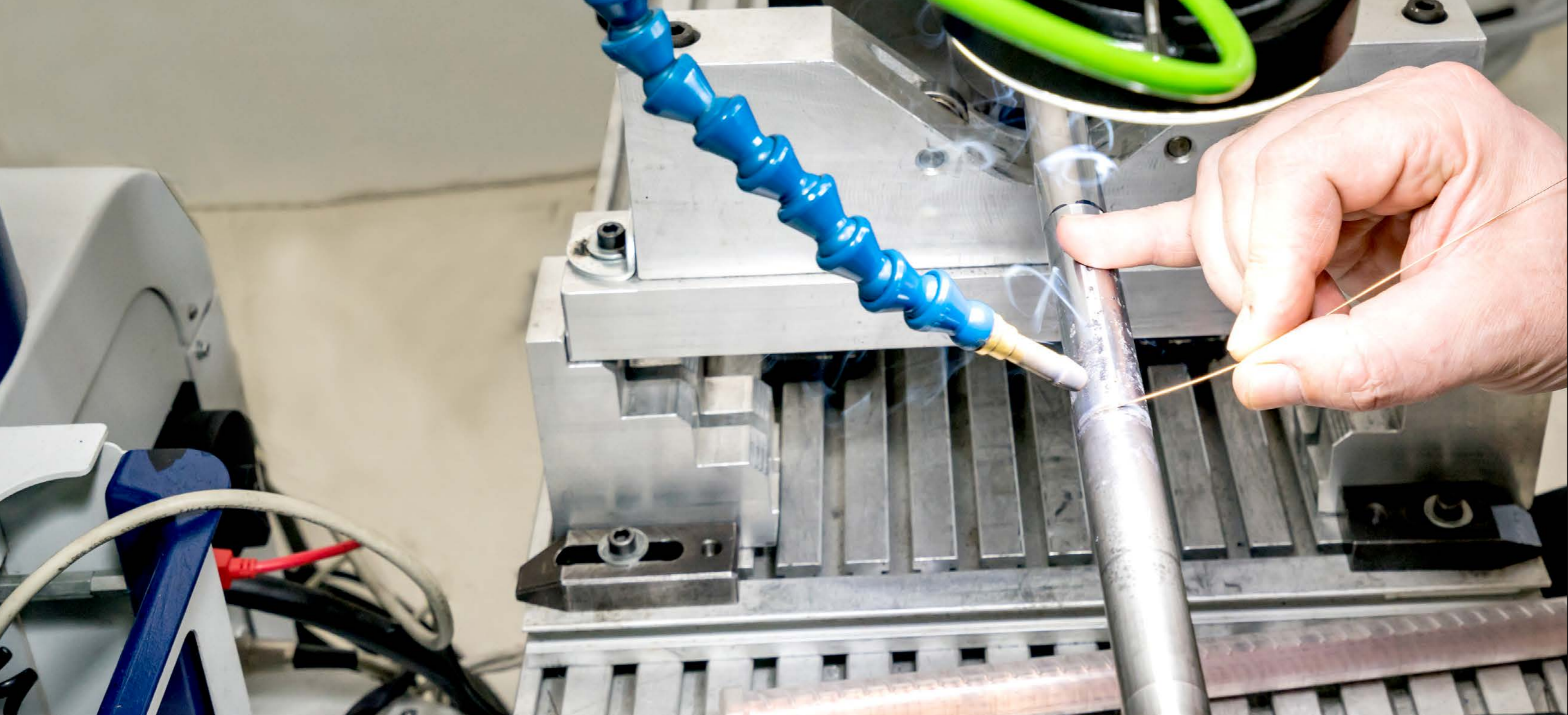
We can restore defective components to their original state. In other words, neither usage nor ageing are factors. The lifespan increases significantly.



Laser welding system with 350 watt special laser.

USING THE **LASER**


Using laser welding, the lower and upper materials are connected immediately. Using extremely high temperatures results in a uniform material the properties of which correspond exactly to the original part.



MAXIMUM HARDNESS

Laser welding also means maximum hardness and resistance.

Accordingly, it is possible to re-assemble and maintain parts of every size and shape (almost) indefinitely.



HSK 50 cone with high strength alloy wire, laser welded. Inner Cone before finishing.



DRAW ON COMPREHENSIVE RESOURCES

12,000 spindle bearings in stock, 8,000 spindle bearings used annually. It should be noted: We only stock original parts by manufacturers of premium quality such as Röhms, OTT, SKF, FAG and NIC.

The advantage of our enormous warehouse is delivery time. As soon as a spindle bearing is required, our stock management system alerts us and it is delivered directly to the assembly unit.

SHAFT RESCUE SYSTEM **REPAIR INSTEAD OF REPLACE**

With our shaft rescue system we look after the cone of your spindle. This saves you from buying a costly replacement spindle.

Our promise: After treatment by the Spindeldoctor, your spindle will usually work better than before.

Our warranty: Full functional scope in accordance with DIN 69871.

Our motto: Smart instead of expensive.

The interface has been switched off from the milling spindle. The new pre-built interface is now used. The Shaft Rescue System from Spindeldoctor.



200 REPLACEMENT SPINDLES AVAILABLE AT ANY TIME

If you are in a hurry, we have more than 200 spare spindles in stock at any time, and keep our spindle hotel open for you 24 hours a day. You can read a full overview of our current inventory on our website, which includes virtually every manufacturer. We usually have a large number of obsolete spindles from renowned companies such as Franz Kessler, Hurco, Cytec or Deckel Maho.

These are ready for use within 24 hours and thanks to our own courier service, usually within a few hours of your request. In addition: You only pay the repair costs that have already been incurred plus a small flat rate.

INNOVATION 2016

BLACKBOY

With the **BLACKBOY**, we have re-defined the rotary coupling for the Deckel Maho 1129-584 seal. We have also created a much more powerful alternative to the blue seal kits.

Benefits:

- Bearingless connection for machine tools
- Special seal also allows dry operation
- High heat resistance
- Minimum heat and vibration generation
- Low wear due to honeycomb structure
- Structure made of anodised aluminium
- Spring and rotor made of stainless steel

The result:

A longer service life for your spindle!



SPINDLE DOCTOR POWER FILTER

Where there is work, there is potential. With our power filter, you will avoid unnecessary chip formation and protect your machine against abrasion (wear by rubbing) and a premature failure of the rotary transmissions. The operation of the system corresponds to that of the cartridge filter. Added to this is the advantage of a fillable and replaceable bag that acts as a filter unit.

One special advantage of the power filter is its versatility. The lean system is fitted to every CNC machine and can also be integrated accordingly. In this way, the machine is protected in the long term and spindle damage or breakdowns become a thing of the past.



LOYAL SPINDELDOCTORS

A company like Spindeldoctor likes loyalty. Many of our employees have been with us for several years and have played a key role in our success story.

High time to say "thank you"!





OUR TRACK RECORD

- + 100 Employees
- + 2,500 Spindles repaired
- + 800 different brands
- + 2,400 different types of spindle
- + Over 5,000 service implementations
- + 3,500 satisfied customers

... and a strong team

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