

one group, one drive shaping tomorrow

DVS TECHNOLOGY GROUP







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one group, one drive: shaping tomorrow

The DVS TECHNOLOGY GROUP is a consortium of some of the most experienced specialists that share a common goal: To machine surfaces with such accuracy, efficiency, and responsibility that the challenges of the future can be handled safely – both for traditional and alternative drives as well as for industry at large.



Future challenges must be met with technical innovation – and these innovations often require a level of precision that is beyond what has been technically feasible to date. The individual solutions of the companies of the DVS TECHNOLOGY GROUP are shared in their respective domains, data and experiences are exchanged, and the solutions are coordinated. The result is a technology landscape that combines accuracy on the micro level for the complete processing of high-precision parts and the mindset of a turnkey solution provider.

Wherever precise gearing and ultra-fine surfaces down to the near-impossible are needed, we offer detailed solutions of the highest quality and combine these into modular system solutions for efficient turnkey machinin.



The new board of directors of DVS Technology AG (from left to right): Mario Preis, Dr. Christoph Müller-Mederer, Stefan Menz.

"Wherever there is movement in the future, we are there."





Mechanical Engineering Driving the Future

The DVS TECHNOLOGY GROUP is home not only to some big and established names in mechanical engineering, but also new and flexible accelerators of digitalization and automation.

Together, we are the engine that drives industrial development. The synergies of our competencies enable us to achieve a level of precision in turnkey machining that makes some of the current developments possible in the first place.

Our shared philosophy as a user-oriented solution provider successfully solves even the most complex challenges of our customers. We combine sound experience in mechanical engineering, creative ingenuity, unrivaled technical quality, and economic responsibility.





Services and Solutions

As a group, we are more than just the sum of our parts – SYNERGY. We are a solution provider in a dynamic environment – SOLUTIONS. And many of these solutions are groundbreaking – INNOVATION.

> Digitalisation Machines 10015 CDVS Production

Synergy

Combining and Leveraging Specialized Expertise

The DVS TECHNOLOGY GROUP is more than just the sum of its parts: The exchange of technology, transfer of knowledge, and our conceptualization in systems and modules yield impeccably coordinated machinery, tools, and production.

Solutions

Flexible methods and creative outlook

Innovations require an environment where ideas can flourish and practical testing is possible. We use the innovation platform DVSACT to allow as many employees as possible to participate in the process. In our production facilities we develop ideas for novel products.

Innovations

Machines make products. People create solutions.

We put ourselves in the shoes of the users, which is why we deliver more than just a machine – we support you throughout the entire life cycle before and after your acquisition, and data and information are just as important to us as steel and ceramics.





Facts & Figures

1871 Naxos-Union was founded, one of the very first manufacturers of grinding machines. 1911 Diskus Werke is founded, whose dis grinding methodology is still an industry standard today. As you can see, the DVS TECHNOLOGY GROUP has always been home to some notable mechanical engineering history as well as engineering ingenuity.

The headquarters of the DVS TECHNOLOGY GROUP has been located in the Rhine-Main metropolitan region in Dietzenbach since 2016. Additional locations of the individual companies and service units of the group are located in Aßlar, Butzbach, Eschwege, Bad Camberg, Sinsheim, Schwalmstadt-Ziegenhain, Hemer, Krauthausen, Kürnbach, Munich as well as in Plymouth (USA), and Taicang (PR China).

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DVS International



International DVS locations International DVS agencies





DVS MACHINE TOOLS & AUTOMATION











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BUDERUS SCHLEIFTECHNIK

Trust through Performance

BUDERUS machinery is used when performance is the top priority.

When it comes to the hard-finishing of rotationally symmetrical components, BUDERUS Schleiftechnik is one of the leading providers of precision machinery for internal/external cylindrical and thread grinding, often in combination with hard turning.

BUDERUS technologies ensure that gears and shafts are machined down to micron accuracy for maximum precision in modern vehicle transmissions.

In addition to the manufacture of an extensive range of hard processing machines, Buderus Schleiftechnik also offers other services beyond "common" mechanical engineering. This includes contract manufacturing, wire grinding, control cabinet construction, and trading in used machinery.





"We meet the requirements of our customers with expertise, experience, flexibility, and reliability."

Reiner Jörg Managing Director at BUDERUS Schleiftechnik







"Quality is not a coincidence. It is always the result of thorough thought."

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Dr. Markus Brumm Managing Director at DISKUS WERKE Schleiftechnik

DISKUS WERKE SCHLEIFTECHNIK

DISKUS, First in Face Grinding

DISKUS machines are setting new benchmarks in disc grinding.

As a pioneer in the industry, DISKUS WERKE Schleiftechnik GmbH has been specializing in face grinding and double face grinding since 1911. To this day, the technical term for the process is "DISK grinding."

DISKUS is one of the leading manufacturers of machine tools for processing flat and parallel surfaces. DISKUS face grinding machines ensure maximum

accuracy coupled with a large removal rate.

DISKUS WERKE offers not only relevant measuring technology, but also the optimization of grinding processes. Schleiftechnik GmbH.







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GDVS

VIVERSAL





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Website www.dvs-universal-grinding.de DVS UNIVERSAL GRINDING

Economical Hard-Fine Machining in a **Universal Machine**

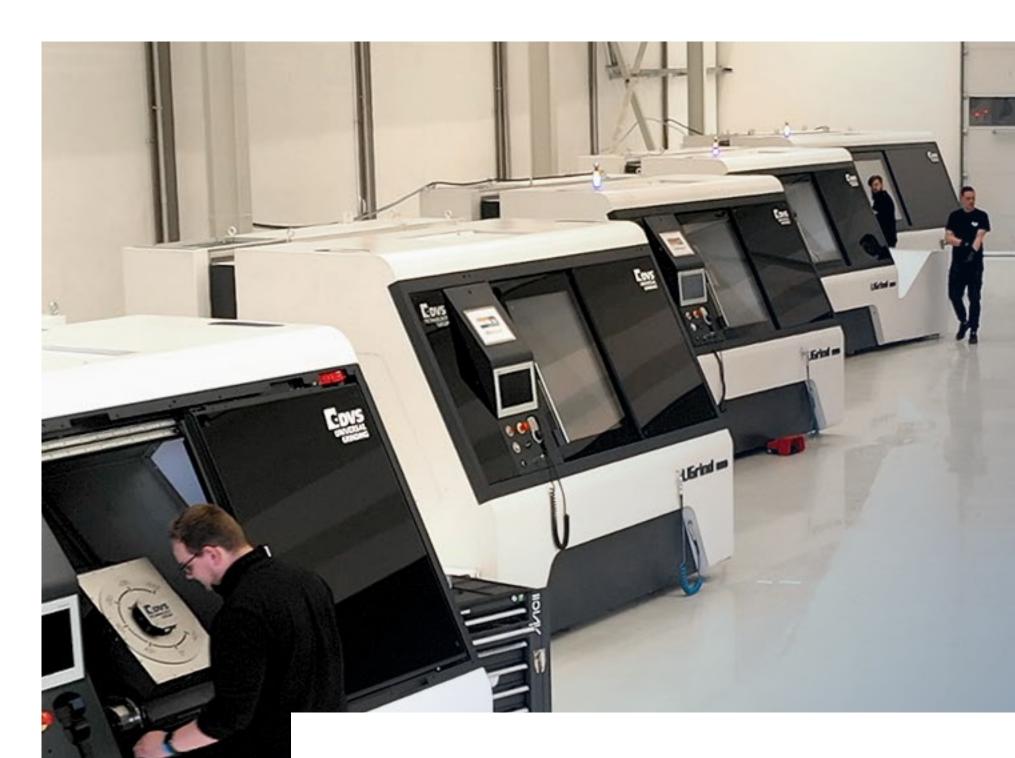
DVS Universal Grinding GmbH offers tailor-made solutions for turning and cylindrical / face grinding of inner and outer diameters in a single clamping.

The UGrind is a universal workshop machine tool for the production of individual parts and small to medium series, as well as for the automated series production of shafts and chucking components for manufactures of clamping devices, milling tools, components for automobiles, agricultural machinery, general mechanical engineering, etc..

For the economical machining of brake discs, two new machines – the UGrind 800DD and UGrind 1500DDV – were developed on the basis of the UGrind. They are used by renowned customers. These two models are used in fully automatic operation for the simultaneous machining of friction surfaces of cast brake discs, hard-coated brake discs and brake discs made of carbon ceramic.

Hard facts: Turning, grinding, and polishing of hard metal tools. As part of the GVS Technology Group, the company has extensive competencies in various manufacturing technologies.





"Progress is not about improving on the old, but focusing on the new."

Sabri Akdemir Managing Director at DVS UNIVERSAL GRINDING





"The enthusiasm for technology is also fueled by reliable cooperation."

> **Dr. Markus Brumm** Managing Director at PITTLER T&S

PITTLER T & S

TTLER

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Solutions for the Future

High-precision lathe machining for soft and hard turning

Constantly diminishing product life cycles require flexible and scalable solutions. Vertical machining centers are pivotal to setting economic and technological standards today and in the future.

PITTLER T & S develops and manufactures high-precision turning centers for soft and hard turning as well as for the drilling and milling of rotationally symmetrical components with a diameter of up to 5,000 mm.

Due to the transfer of knowledge and technology at DVS TECHNOLOGY GROUP, we are able to provide and implement integrated solutions.

In addition to external gears, internally toothed housings can also be completely machined on a PITTLER SkiveLine. This is made possible by producing the special profiles with PITTLER Skiving and all other functional surfaces by turning, drilling, and milling.







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PRÄWEMA





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Website www.praewema.de PRÄWEMA ANTRIEBSTECHNIK

Cutting Edge with Precision and Technology

Market and technology leader in gear honing.

PRÄWEMA develops and produces machinery for gear machining and manufacture. The focus is on gear wheels, synchronous parts, and shafts of vehicle gearboxes. The PRÄWEMA technology portfolio comprises not only the milling of latching grooves, backings, and gearings, but also taper cutting and gear grinding.

The gear honing technology was continuously developed at PRÄWEMA until market maturity on a competitive level was reached. With over 500 machines sold, the company is the worldwide market and technology leader.





MALA

"We are always striving for technological innovations and outstanding solutions."

Jörg Schieke Managing Director at PRÄWEMA Antriebstechnik



"Modular thinking and tailored in practice – for customers and their visions"

robotics

CDVS TECHNOLOGY GROUP

> Frank Götz Managing Director at rbc robotics



ABR

RBC ROBOTICS

Modular Cameraguided Automation

rbc robotics GmbH has been a leading solution provider for camera-guided robot systems for more than two decades.

With the company's extensive experience in a wide range of key industries, rbc robotics is well positioned to provide intelligent, automated robot solutions for manual feeding processes.

The result is higher production efficiency and productivity today and in the future. Innovative concepts require know-how: rbc robotics offers a unique set of skills, not only for processes and programming, but also in terms of economics.

With camera technology, our automation cells take the next leap: they learn to see.







rbc robotics | 14

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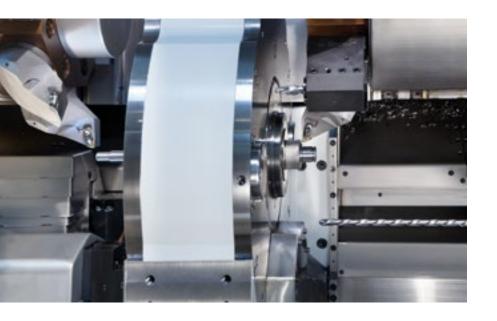
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WMZ

VERKZEUGMASCHINE





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WMZ ZIEGENHAIN

Shafts for Future Mobility

Successful in mechanical engineering for 50 years.

WMZ is the specialist for turnkey shaft machining. The shafts are completely turned, milled, and drilled with the main and counter spindles as well as in two-step operation or with chained machinery.



Gear cutting on shafts up to module 6 is possible through the integration of a power-skiving module. This technology achieves excellent running tolerances between the toothing and the bearing set, requiring no separate gear cutting machinery.

The center drive technology is another WMZ specialty. The workpiece is clamped in the center with a collet. As a result, the ends of the workpiece are exposed and machinable inside and outside with up to four tools in one clamping. Outstanding running accuracies are achieved with this approach.

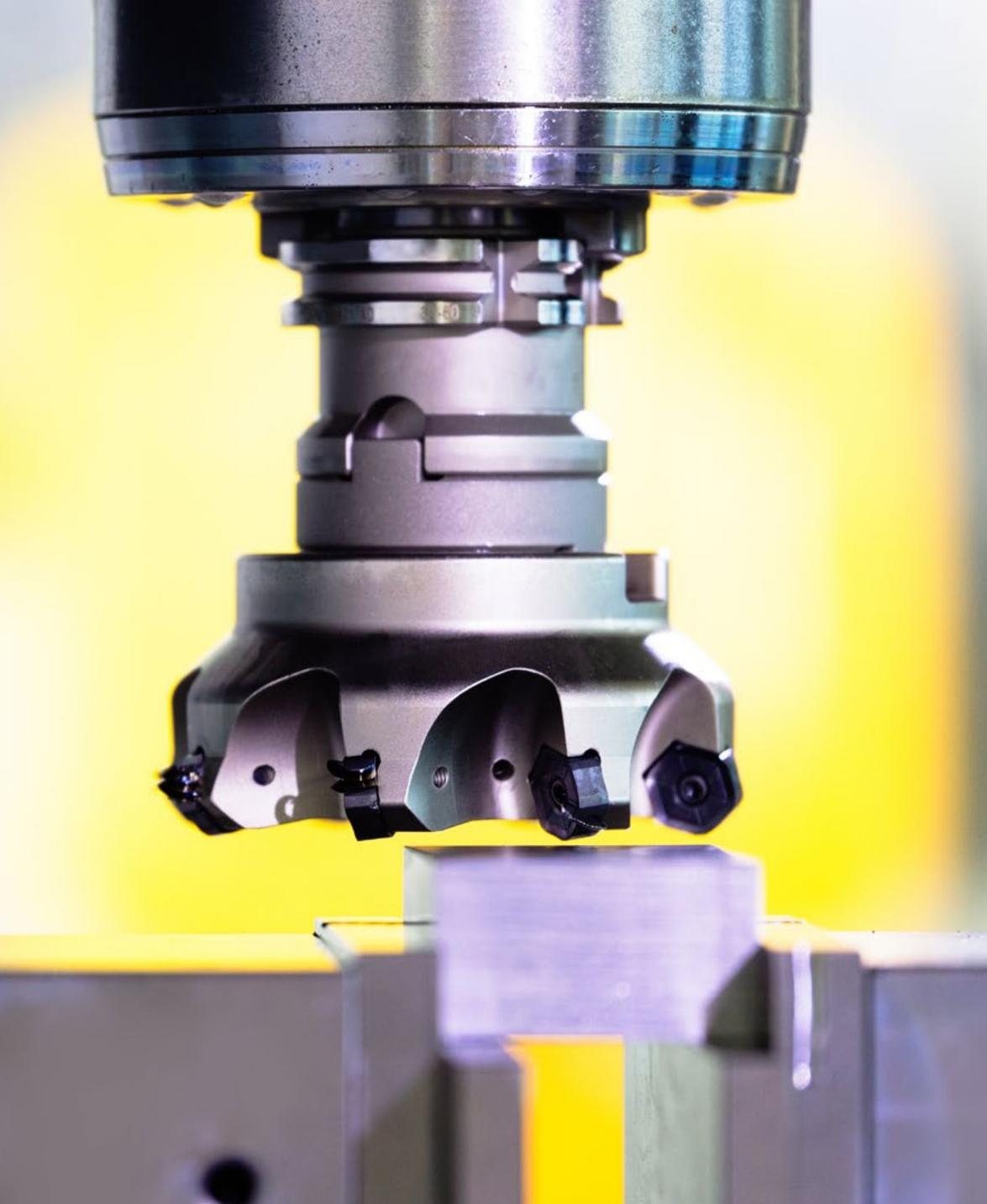


"Efficient and reliable manufacturing solutions for toothed shafts enable sustainable mobility."

Dr. Udo Tüllman Managing Director at WMZ Ziegenhain



DVS TOOLS & COMPONENTS





"The quality of our goals determines the quality of our future."

> Sandro Schäfer Managing Director at DVS Tooling

DVS TOOLING

Tooling Solutions and Technology Support

The DVS TOOLING assortment offers every tool possible for gear honing.

With original tool solutions and worldwide technology support for PRÄWEMA gear honing, DVS TOOLING GmbH provides important added value for gear manufacturers.

The product range of DVS TOOLING covers every conceivable tool for gear honing. The core products include the PRÄWEMA ORIGINAL honing ring and the VarioSpeedDresser dressing tool.

With the specially developed "DVS LaserCut" finishing technology on the VarioSpeedDresser, DVS TOOLING is able to achieve unrivaled surface quality and profile quality of toothed components.







DVS Tooling | 17

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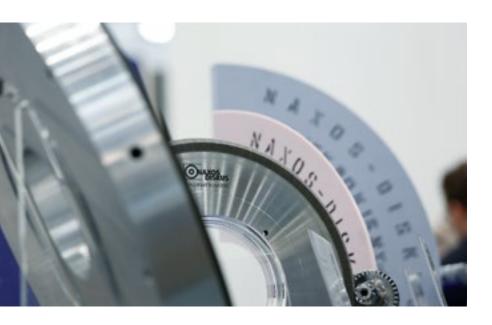
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NAXOS-DISKUS

150 Years of Honed Quality

The grinding quality of the control gears determines the running quality of the gearbox.

NAXOS DISKUS Schleifmittelwerke GmbH was founded in Frankfurt am Main in 1871. Today, the company manufactures precision grinding tools for a wide range of applications. The products primarily comprise grinding tools for doublesided surface grinding, external cylindrical grinding, centerless grinding, and gear grinding. Depending on the application, the grinding tools are made from conventional abrasive grit through to ultra-hard cutting materials such as CBN and diamonds.

As a system partner, NAXOS works closely with DVS grinding machine manufacturers to develop individual tool solutions.





"The production standards of our group are fueled by the satisfaction of our customers."

Ernst Löffler Managing Director at NAXOS-DISKUS









"Live in the future, then build the missing parts."

Joachim Ernst Managing Director at WMS



Garrier alledos de char Menter character const her sico

WIN

Dienstleistungen rund um ihre Merkzeugmaschim

W M S

Efficient Industrial Service for Your Production

Maintenance, servicing, repair, modernization and spare parts supply.

Werkzeugmaschinenbau Sinsheim GmbH (WMS) is a service provider for machine tools and their modules. The company's services include all maintenance measures, servicing, repairs, modernization, and the supply of spare parts for individual assemblies or entire systems. WMS uses the original documents and spare parts from the manufacturers.

The company also offers various special services, including the development and optimization of processing technology and production support.

In addition to the conversion of used machinery and retrofitting of existing systems to 4.0 technologies, WMS also offers remote service.







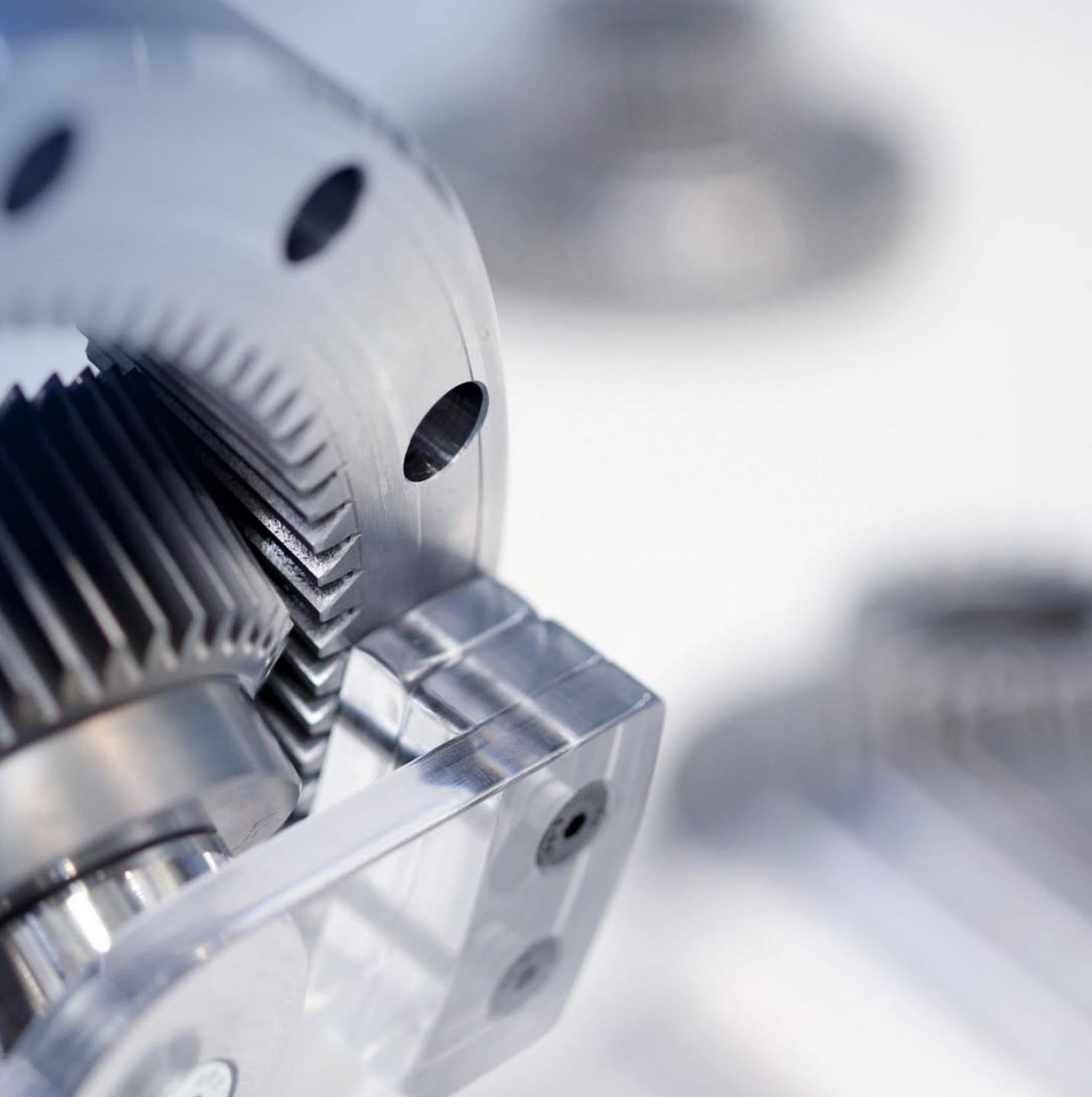
WMS | **19**

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DVS PRODUCTION





"We realize the high-precision machining of sophisticated components for modern drives of today and tomorrow."

> **Guido A. Herr** Business Unit Manager Division Production

From Blank to Precision Component

DVS PRODUCTION offers contract manufacturing that covers all large-scale production aspects.

DVS PRODUCTION produces serial components for passenger car transmissions at its Krauthausen site in Thuringia on behalf of key manufacturers in the automotive industry. The company has also established itself in the field of e-mobility. Through the use of turning, gear cutting, grinding and honing technologies, the entire process chain for soft and hard machining is carried out in Krauthausen.

Only the latest machine generations from the DVS TECHNOLOGY GROUP are used for production. With certification according to ISO/ TS 16949, DVS PRODUCTION GmbH further emphasizes its own, enormously high quality standards and ensures a consistently high level.







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PRODUCTION SOUTH





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DVS PRODUCTION SOUTH

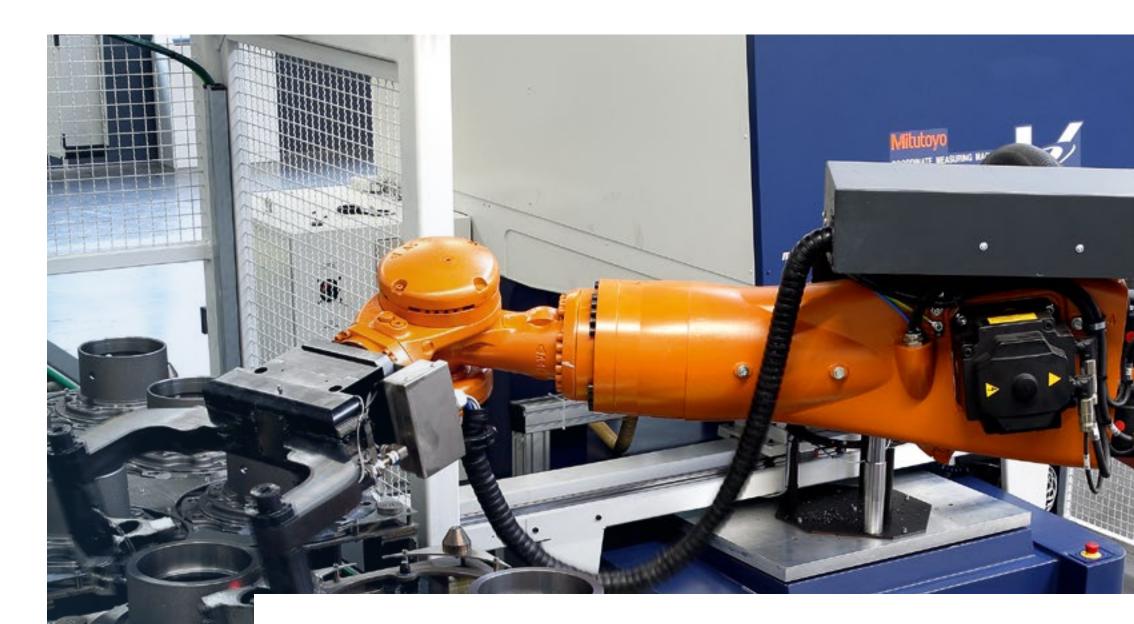
Flexible Production of Precision Components

Machining of precision components for vehicle engineering and industry.

Truck wheel hubs are mass-produced on behalf of the commercial vehicles industry using state-of-the-art manufacturing technology based on Industry 4.0 principles. A highly efficient and near-fully automated production line has been realized thanks to driverless transport and RFID technology.

Even smaller-volume turning or milling lots are manufactured economically and reliably at our site in Kürnbach near Karlsruhe in southern Germany.





"With more than 25 years of experience in the processing of precision parts, we are one of the leading contract manufacturing companies in Germany."

Friedbert Krämer Managing Director at DVS Production South





DVS PRODUCTION CHINA

Exchange leads to Progress

German Technology and Quality "Made in China"

Following the example of the German DVS production plants, DVS PRODUCTION CHINA manufactures precision components for the Chinese vehicle industry at the Taicang location. State-of-the-art machining technologies and efficient machines and tool solutions from the DVS TECHNOLOGY GROUP are used. The networked cooperation promotes further growth with innovative machining solutions.

Phone +86 512 5367 9988-0

E-mail info@dvs-production.cn

Website www.dvs-technology.com

Individual Technology and Service Solutions for the US Market

Gearboxes, engines, and drive trains for passenger cars and commercial vehicles

Headquartered in Plymouth near Detroit in the US state of Michigan and in the heart of the US automotive industry, the new DVS company will lead and expand the activities of the DVS GROUP and its companies in the rapidly growing North American market. The company will continue to rely on the intensive cooperation with the service and sales partners of the individual DVS companies in the USA. **Phone** +1 734 656-2080

E-mail sales.america@dvs-technology.com

Website www.dvs-technology.com



DVS SUCCESS Stories







"Industry 4.0 is here today. And much like its predecessors, it changes almost everything."

Martin Preiß Head of Digital Innovation and Services at DVS DIGITAL



DVS DIGITAL

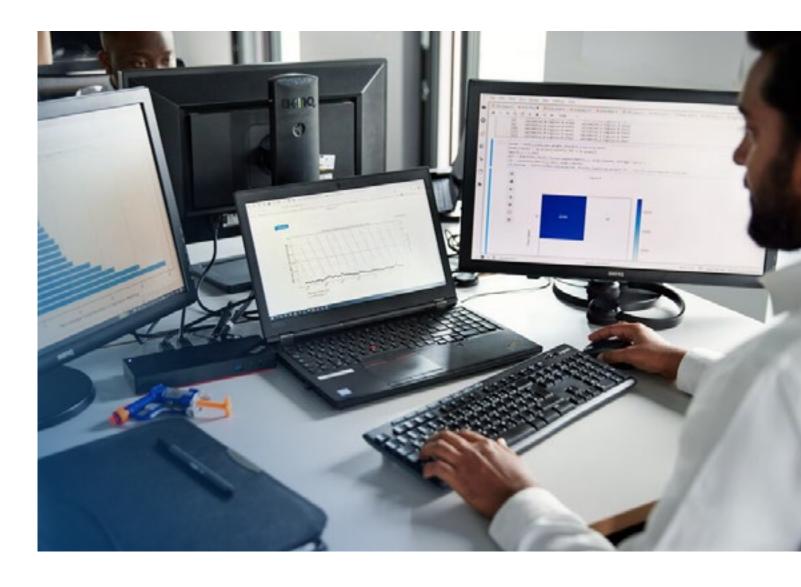
Solutions Made of Steel and Data

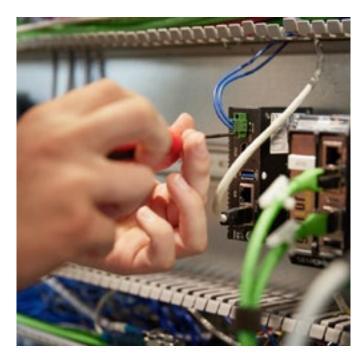
enormous potential.

It is precisely these potentials that DVS DIGITAL taps into with products and services for the complexity of Industry 4.0. The DVS TECHNOLOGY GROUP is evolving from a traditional mechanical engineering company to a synergetic solution provider. DVS DIGITAL is developing the platform for it.

With the DVS DIGITAL walk-in lab, we have created an innovation space where we are developing new solutions with colleagues, customers, and experts from the industrial and digital fields. DVS DIGITAL creates a cloud-based, digital ecosystem, networks machinery and production areas and works with artificial intelligence and big data in order to create the most important added value: sustainability.

Today's machines are networked, exchange data, and provide us with information that has











DVS PRODUCTION

Drive Shaft Production gaining Steam

Automakers are further expanding the production of drive shafts in order to comply with emissions targets. The drive shafts are used in modern hybrid or electric motors.

Currently, there are two products in series production in Eisenach: one for a Scandinavian manufacturer and one for an American manufacturer.

The process begins with the procurement and delivery of raw material. The WMZ H200 then handles all soft machining processes, including gearing and gear production. The hardening process is carried out offsite. The DVS Universal Grinding UGrind handles the final grinding and hard machining process. Subsequent gear honing is carried out on the Präwema SynchroFine. With the final inspection, the products are finally checked, packaged, and shipped. Traceability is ensured through a DMC code affixed to the shaft.

Author: Christian König, Sales Director DVS Production GmbH

One of the most challenging aspects in the production of drive shafts is compliance with the specified tolerances and Noise Vibration Harshness (NVH). The requirements for manufacturing processes and machinery have increased along with today's high quality standards. The portfolio of DVS TECHNOLOGY GROUP addresses this.

In the past, customers produced the components in-house. But with the DVS E-shaft manufacturing concept, drive shafts can be manufactured in up to 50% less time, thus offering the manufacturer significant economic benefits. Customers are not required to make any investment commitments when ordering. This is extremely beneficial in the case of fluctuating orders from OEMs and tier-ones. Through the company's in-depth knowhow, DVS Production is able to support customers already in the development phase and thus create economic processes. The company is keen on continued growth and is open to new inquiries and discussions on the issue.







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