



WITTENSTEIN

## The WITTENSTEIN Group

Companies, products  
and services  
of the WITTENSTEIN Group



# Our fields of competence are

## Machine & Plant Construction



For decades, we have served as a competent partner to companies involved in the development, design and manufacture of machines for factory and process automation. During this time we have built up unrivaled know-how in a variety of industries.

Our customers profit from our outstanding expertise in the following fields:

## Automation, Robotics, Handling



We offer gearhead and actuator solutions as well as small servo motors for the rotary axis. These solutions are suited for use in all manner of environments: versions for dry areas and applications where strict hygienic and chemical resistance requirements apply. A broad array of precise and highly dynamic motors are available for those applications where a high throughput is called for. iTAS® – our modular servo drive system – sets benchmarks in the intralogistics sector. Every one of our solutions is characterized by absolute compatibility as well as maximum flexibility and scalability.

## Semiconductor & Electronic Assembly



In the semiconductor industry the highest possible precision is a vital prerequisite. Reliability and productivity are other crucially important aspects. The drives must be designed as compact as possible owing to the mounting situation. We offer solutions combining extreme power density, high dynamics and precision. Our drives provide optimal synchronous running – even in vacuum environments, leading to significantly higher throughputs.

## Woodworking



A combination of dynamics, precision, efficiency and process reliability is called for in the woodworking industry. We supply gearboxes, actuators and mechanical linear systems to meet all needs: our portfolio includes precise and highly dynamic drive systems for complex applications with high requirements. At the other end of the spectrum, our Basic and Value planetary gearboxes and linear systems unite high quality and precision with extremely attractive prices.

## Plastics & Rubber Processing



Dynamic drives are a good strategy for raising productivity. The use of linear actuators for high forces is another possible option. The systematic selection of servo technology rather than hydraulics is recommended in many cases as a way to improve energy efficiency. The power dense drives we offer for this purpose are perfect for plastics processing machines, where space is generally restricted.

## Food & Packaging



We provide a comprehensive portfolio of drive solutions all along the production line – from manufacturing to packaging of the foods in wet or dry areas. Our highly specific gearboxes, servo actuators and motors feature an EHEDG-compliant design with protection ratings up to IP69K. Our Hygienic Design gearbox is the first planetary gearbox in the world to earn EHEDG certification. Our cymex® 5 sizing tool ensures optimal integration of the drive technology in the machine's overall system.

## Machine Tools



Our products are characterized by high precision, excellent performance and power density and exemplary reliability. That helps reduce manufacturing costs and enhance the efficiency of the machines. Low-backlash planetary gearboxes, mechanical and mechatronic linear systems, actuators and highly precise, customized servo motors are an integral part of our portfolio. Our revolutionary Galaxie® Drive System achieves torque and stiffness characteristics several times better than traditional hollow-shaft drives.

## Other Industries



Cutting-edge technology made by WITTENSTEIN is also found in numerous other industries such as glass engineering, textile processing, printing & paper or special-purpose machines for an array of uses. Our portfolio includes low-backlash planetary gearboxes, high-precision spur and bevel gear sets, gearing components for driven tools, linear systems, actuators and complete mechatronic drive systems.



## Aerospace



It is a priority for the aviation industry to develop ever more efficient aircraft without compromising on safety. Thanks to their excellent power-to-weight ratio and reliability, our mechatronic systems contribute towards achieving and exceeding this objective. Our EASA approval and global service network enables us to offer all essential services to provide system suppliers, aircraft manufacturers and airlines with reliable mechatronic drive capacity for the entire life cycle of an aircraft.

## Automotive & E-Mobility



Since 2006, we have set benchmarks worldwide for power density, efficiency and intelligence for the drive trains of electric and hybrid vehicles. Our catalog includes traction drives, generators and electric drives for turbochargers and compressors, including smart control software. Our unique engineering solutions and serial products are especially used in space-restricted applications or for small serial quantities.

## Energy



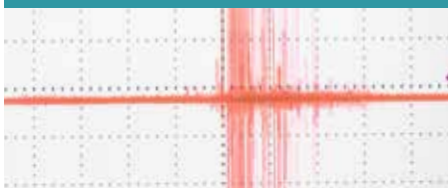
We have long been working successfully on solutions for energy efficient drives, new generations of power generators and energy recovery systems for many sectors. Thanks to their extremely high resistance to radioactivity, our radiation-proof rotary servo motors, actuators and generators open up completely new applications for nuclear power plant operators. On request, we build products in strict compliance with IEEE standards or explosion-proof to ATEX guidelines.

## Medical Technology



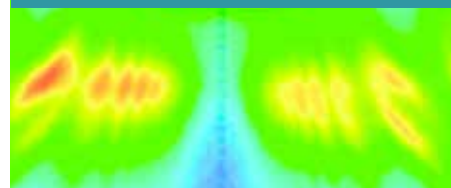
In the medical technology sector, where mechatronic drive solutions play a major role, we are an experienced and innovative partner. For more than 20 years now, we have been developing and producing motors for various cardiac assist systems. These motors are wear-free as well as extremely lightweight and compact. They have meanwhile been used in well over 1000 patients.

## Measuring & Testing Technology



Modern production processes are increasingly complex. To control them accurately and reliably, the measuring and testing technology must be taken to new levels of precision and compactness. Our IDS3010 sensor enables dynamic, nanoprecise measurements in industrial applications for the first time. Our ultra-compact, customized drives simultaneously open up new possibilities for developing systems and equipment – even in extreme environmental conditions.

## Nano Technology



In order to record, research and further develop the nanotech world, you need instruments that work reliably even in the subatomic range. For over 10 years now, we have been developing and producing nanoprecise sensor, actuator and microscopy solutions that push the limits of what is physically and technically possible. This work is interdisciplinary and innovative: we are ready to forge new and highly innovative paths with our customers.

## Oil & Gas Exploration



The ambient conditions in the oil and gas industry place stringent demands on machines and systems. Our rotary servo motors and generators are available either with or without a housing; they are highly shock and vibration-resistant and enable stator winding temperatures up to 240°C and ambient pressures up to 2100 bar. To allow oil and gas to be processed and extracted on land or below the ocean surface, we offer highly integrated mechatronic systems with extremely robust designs and high-precision calibrations.

## Simulation



Flight simulators enhance air safety. They can be used to provide civilian and military pilots with practical instruction and training. Control loading systems are the sensitive human-machine interfaces in such simulators. We offer our customers these systems from a single source, including all the integrated hardware and peripherals as well as the necessary software systems and programming for aircraft type-specific databases.

## Digitalization



Digitalization is a chance to make growing complexity and the increasing trend towards mass customization manageable. This can only happen within a digitally networked manufacturing environment. That is why we develop a broad range of products and solutions for environments in which production machinery and logistics systems are linked together and will have the capability to organize themselves in the future. We also offer our customers digital services which support condition monitoring or predictive maintenance, for instance, as well as attractive online tools that provide valuable assistance from a product finder to after-sales.

## **WITTENSTEIN helps you secure key competitive advantages**

We develop customized products, systems and solutions for highly dynamic motion, maximum-precise positioning and smart networking for mechatronic drive technology. Our aim is to provide innovative and future-proof solutions that help you stay at the cutting edge. We have six Business Units for this purpose with specific core competencies united under one roof.

You can find our products in industry, in people, in space and underground. Our portfolio includes low-backlash planetary gearboxes, complete electromechanical drive systems and AC servo systems and motors. They are used, among other things, in robotics, machine tools, medical technology and aerospace.



WITTENSTEIN alpha develops and produces mechanical and mechatronic servo drive systems for application-specific needs. Our products consistently raise the bar around the world.

We have divided our product portfolio into four segments in order to meet very different requirements: in the Premium and Advanced segments, we focus on technology and performance while in the Value and Basic segments, the emphasis is on cost-effective and high-demand products.

## WITTENSTEIN cyber motor

Highly dynamic servo motors and drive electronics



WITTENSTEIN cyber motor develops and produces technologically advanced servo motors and demanding drive electronics as well as complete mechatronic drive systems with maximum power density. Our expertise is in specialized motors for ultra-high vacuums, high temperatures and radioactive environments.

We collaborate closely with our users on individual projects to exchange ideas, learn from each other and discover new opportunities that help our customers stand out from the competition.

## WITTENSTEIN galaxie

Superior gearboxes and drive systems



WITTENSTEIN galaxie develops and manufactures radically innovative gearboxes and drive systems based on a totally new functional design principle. With this unique expertise, we are the global leader in rotary mechatronic drive technologies.

These innovations help our customers designing machinery with vast performance parameters to secure their competitive core-advantages for the future. Our solutions enable products to be manufactured in a particularly efficient and resourceful way.

## WITTENSTEIN motion control

Mechatronic and cybertronic drive systems for extreme environments



WITTENSTEIN motion control uses own servo motors, gearboxes, electronics and software to develop and produce customized mechatronic systems for especially critical environments. Our development expertise and the high level of vertical integration of the components ensure that these technologies meet our customers' requirements.

Our innovative solutions are focused on fields where success depends on performance, robustness and reliability – aerospace, simulation, defense and subsea. Real-time safety software rounds off our portfolio.

## attocube systems

Nanoprecision drive and measurement technology solutions



attocube develops and produces drive and measurement technology for highly demanding nanotech applications. The product range includes everything from nano drives through fully integrated microscope systems to innovative sensor solutions, which far exceed current measurement technology in their precision, speed and compactness and can also be used under extreme conditions.

Years of experience and expertise in both the scientific and industrial market segments have yielded an inspiring product catalog with maximum precision and user-friendliness. This clearly superior technology is revolutionizing existing applications and guarantees lasting competitive advantages for our customers.



## Digitalization

To enable us to drive digitalization forward, we have set up a separate organizational unit – the Digitalization Center. There, we are systematically developing our competencies in the areas of software, sensors, electronics and data. We have defined four strategic focuses, referred to as agile trains:

Smart Factory & Smart Operations addresses an environment in which production machinery and logistics systems have the capability to organize themselves.

Smart Products & Data Driven Services examines how products can collect information both on their environment and on their own status. This serves as a starting point for our customers to improve their production processes in real time and lays the foundation for customized services.

Smart Customer Journey provides, and continuously develops, digital touchpoints in the form of online sizing tools.

Without the Digital Transformation train, all of this would be unthinkable. To enable us to become a digital innovation leader, we endorse an agile culture and seek to acquire sustainable skills. This train also puts the emphasis on maintaining and expanding the partner network as well as on the development of digital business models.

Our Digitalization Center has a vision: in the future, self-learning products and systems will become interconnected through digital awareness. The human beings at the center of the factory control the physical value added by means of virtual replicas of the value chain – from suppliers through customers to our production facilities.

baramundi provides companies and organizations worldwide with efficient, secure and cross-platform management of networked endpoints in IT and manufacturing. The Management Suite provides our customers with integrated, future-orientated unified endpoint management.

baramundi leads the way in regard to unified endpoint management in networked production environments. We develop this solution in close cooperation with the WITTENSTEIN Digitalization Center.



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**WITTENSTEIN – one with the future**

**[www.wittenstein-us.com](http://www.wittenstein-us.com)**