

Precision
Performance
Power



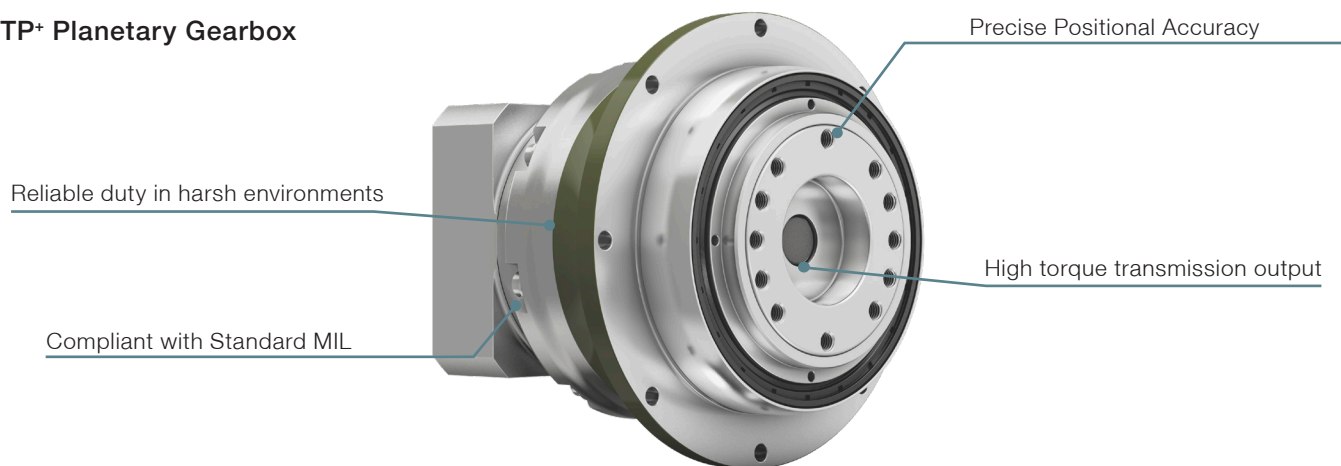
motion control

Motion Systems for Defense Applications

Ruggedized Gearboxes

Designed to excel in the battlefield of the future, WITTENSTEIN motion control presents a range of intelligent and integrated electromechanical drive systems, purpose-built to withstand the harshest of environments in defense applications. These cutting-edge solutions draw upon the well-established WITTENSTEIN technology, ensuring unrivaled reliability and efficiency for both rotary and linear motion. Every custom product we offer is meticulously crafted to surpass industry standards, meeting rigorous military criteria for extreme environmental conditions. The manufacturing processes employed by the WITTENSTEIN group further enhance the durability and performance of our solutions, making them the optimal choice for mission-critical operations in the most challenging terrains.

TP+ Planetary Gearbox



1	Temperature	2	Torque Density	3	Vibration Resistance	4	Corrosion Resistance
	<ul style="list-style-type: none"> Improved efficiency Expanded temperature range for MIL Std. compliance 		<ul style="list-style-type: none"> Reduced installation space Industry-leading power to weight/size ratio 		<ul style="list-style-type: none"> Coupling-free integration Resilient to shock and vibration 		<ul style="list-style-type: none"> Chemical conversion coatings Coatings to fit mission environments

Technical Data

Product Type	Units	TP+
Ratio	i	4 - 100
Number of Sizes		7
Max. Backlash	j_l [arcmin]	Standard ≤ 3 Reduced ≤ 1
Max. Torque	T_{2a} [Nm]	43-9600
Max. Input Speed	n_{1Max} [rpm]	7500
Torsional Rigidity	C_{t21} [Nm/arcmin]	1450
Max. Tilting moment	M_{2KMax} [Nm]	8800

Extreme Environment Protection Options

Stainless Steel Mounting Surfaces

Anodized Aluminum

Enhanced Surface Protection (CARG)

Zinc Oxide Coating

Active Coolant Circuit



Additional Products:

Mechatronic Drive Systems

Electrification for Land and Naval Systems

Engineered for victory in tomorrow's battlefield, WITTENSTEIN motion control provides intelligent and integrated electromechanical drive systems of the highest reliability for rotary and linear motion in defense applications. Based on proven WITTENSTEIN technology, all our customized products are designed to deliver industry-leading performance in accordance to military standards for extreme environmental conditions - built and assembled using reliable manufacturing processes of the WITTENSTEIN group.



Power Generation Systems

Electric Powertrain Solutions for HEV and BEV

Since 2006, WITTENSTEIN has set benchmarks in power-to-weight ratio, efficiency and intelligence for powertrains of electric and hybrid vehicles. Our unique engineering solutions and serial products are a perfect fit for space-restricted applications with small serial quantities. WITTENSTEIN is your global partner for highly customized solutions from a few hundred to 10,000 vehicles per year.



Servo Motor Systems

Mechatronic Solutions for Extreme Conditions

Developed and produced technologically advanced servo motor systems from WITTENSTEIN, with maximum power density. Our product know-how encompasses rotative and linear synchronous servo motors as well as servo actuators. Our expertise is in specialized motors for extreme conditions like ultra-high vacuums, radioactive environments or high temperatures.



Smart gearboxes with cynapse® provides a simple way to connect your gearbox to tomorrow's digital world. Using the connectivity of an IO-Link interface, a sensor module is integrated into the existing installation space. You have access to measured variables such as temperature, vibration, operating hours and acceleration as well as product-specific information on the gearbox. This minimizes the risk of gearbox damage and prevents machine downtime.

Ask about a free cynapse® trial.
Combined with the WITTENSTEIN service portal, we support the entire life cycle of your gearbox.



[Click here to learn more about our digitalization efforts.](#)

Our North American headquarters in Bartlett, Illinois houses our executive, sales, engineering and technical support teams, as well as our Technical Center for machining, assembly, testing, service and inventory of products. We locally produce 75% of the products we offer, while continuing to add to our local production portfolio. Our Midwest U.S. location puts product, expertise and quality within easy reach for our customers in North America. You can always contact WITTENSTEIN motion control for assistance with technical, design or application-specific questions.



<< See our Defense Solutions

Contact Us Today >>



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