



Life Cycle Services

Maximum availability and performance for your system

2 Life Cycle Services

Life Cycle Services

Services throughout the entire system life cycle

Here at SEW-EURODRIVE, Life Cycle Services encompass services, tools, and resources throughout the entire system life cycle. This begins in the initial orientation phase and continues all the way through to the operation and modernization of your machinery and systems.

As our customer, you benefit from

- Round-the-clock availability: You can access our services 24/7.
- Specially trained customer service staff: Our team offers you the best possible support.
- Shortest repair times on the market: We minimize downtime and maximize your productivity.
- **Complete service package:** Repairs, retrofitting, and new deliveries for the entire SEW-EURODRIVE product portfolio and for third-party products (drop-in gear units).
- Global presence: We are nearby wherever you are in the world to respond to your requirements quickly and efficiently.

Service during live system operation

Condition monitoring for your system:

- Examination with an inspection scope, mobile vibration analysis, oil analysis
- Permanent vibration analysis with DUV40A or with DriveRadar[®] IoT Suite for industrial gear units, including maintenance recommendations

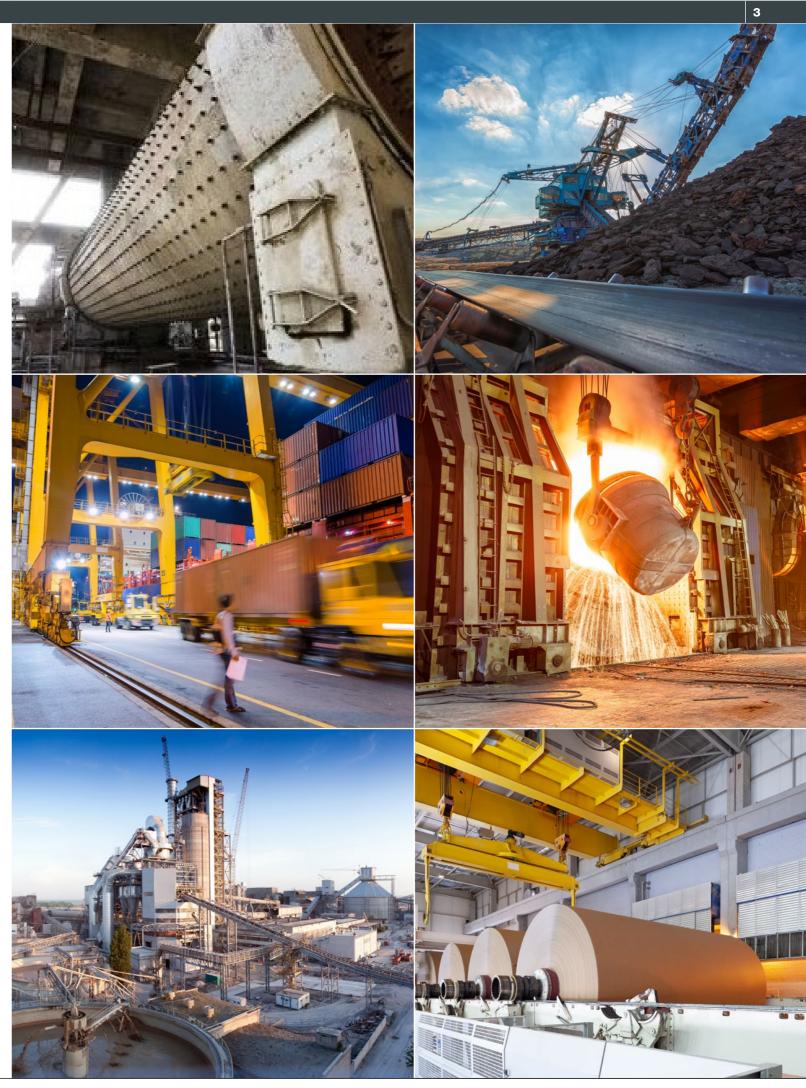
Services during scheduled downtimes or emergencies

- Repair (including "to go")
- Retrofitting
- Drop-in gear units (one-to-one gear unit reproduction)
- Spare Parts Service
- Express delivery within 1 to 15 days "Industrial gear units to go" delivery time program



Find out more about our Life Cycle Services

www.sew-eurodrive.de/en/life-cycle-services



Services during live system operation

Overview of the advantages

We offer you comprehensive service during live system operation, focusing on monitoring the condition of your system. We use advanced technologies and tools for this, ensuring continuous monitoring and analysis:

Manual condition monitoring for your system: Using methods such as examination with an inspection scope, mobile vibration analysis, thermography, and oil analysis, we obtain precise insights into the condition of your system.

Permanent vibration analysis: Using cutting-edge technology such as DUV40A or the DriveRadar® IoT Suite for industrial gear units, including maintenance recommendations, we conduct continuous monitoring of your systems.

This provides the following advantages for you

- Early identification of imminent faults: Thanks to our advanced monitoring technologies, we identify potential problems at an early stage, so as to prevent unscheduled system downtimes.
- You can rely on our expertise and technological know-how to maximize the reliability and performance of your systems.

Examination with an inspection scope

Our inspection scope service offers condition assessment and early damage detection without the laborious process of dismantling the industrial gear unit. Using a video inspection scope, all parts in the gear unit housing, such as gearing components and rolling bearings, undergo a meticulous on-site inspection. The results of the inspection are documented in the service report along with any recommended courses of action. Video inspection scope examinations enable the early detection of gear unit damage, thereby reducing or even preventing downtime costs.

Condition assessment

- Non-destructive condition assessment without disassembling the gear unit
- On-site performance possible
- Creation of service reports incl. logging of damage and wear patterns or anomalies
- Documentation of any recommended courses of action (repair, maintenance, etc.) that may be necessary
- Regular inspection scope examinations help to reveal patterns or trends in relation to wear.

Pitting





Score marks



Micropitting



Over-rolling

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Mobile vibration analysis

Prevention of system downtimes by analyzing the condition of rolling bearings, gearings, and any imbalances, misalignments, loose machine parts, and resonances using a mobile vibration measuring device

- Performance of vibration measurements on the entire drive technology component including, if necessary, influential drive peripherals such as couplings and fans
- Processing and analysis of gathered vibration data
- Determination of the condition of the inspected drive components such as rolling bearings and gearing, and formulation and documentation of any recommended courses of action
- Vibration measurement can be carried out during operation.

Oil analysis

With the help of oil analysis, gear unit wear can be detected early on to prevent unplanned downtime. Information on the condition of the lubricant also prevents premature oil changes, helping you save resources.

- Straightforward sample-taking process using the supplied analysis set
- On-site performance possible

- Simple diagnostics and clear recommendations for action
- Highlighting of trends in relation to oil and gear unit wear through regular oil analysis



The oil analysis process

SEW-EURODRIVE can take care of the entire process for performing a lubricant analysis and any necessary downstream measures.

This means you can focus entirely on your core skills as a plant operator. Time-consuming and costly production downtime can be avoided and maintenance operations can be scheduled as appropriate to condition/ status. If the assessment of the oil's condition is positive, it is possible to extend oil change intervals.

The 5 steps of oil analysis:

- 1. Placing the order
- 2. Taking the oil sample
- 3. Submission of sample for oil check
- 4. Analysis
- Report with recommended courses of action sent by SEW-EURODRIVE





The vibration sensor

You can use the DUV40A to cover a wide variety of applications. Simply configure it to suit the task at hand using the integrated web application and "SmartWeb" software. You can combine several DUV40A units to form a network. Regardless of the number of units you have, they are all managed centrally on one PC running "SmartUtility" software.



Continuous vibration analysis with DUV40A

The DUV40A vibration sensor enables permanent, cost-effective monitoring for your drive technology components. By detecting alignment errors, rolling bearing damage, imbalance, or gearing damage at an early stage, it makes unplanned downtime a thing of the past. The DUV40A is easy to install and wire, meaning it can also be easily retrofitted into existing systems.

- **Vibration sensor** for permanent, automated monitoring of drive technology components
- Reliable detection of alignment errors, rolling bearing damage, imbalance, and gear damage
- Execution of simple monitoring tasks as a plug-and-play solution with teach-in mode
- Advanced monitoring to detect specific damage patterns based on customized configuration of the DUV40A
- Expansion of the measurement range by integrating up to three additional sensors
- Interfaces enabling connection with the control station or controller
- Direct access via Ethernet and web browser
- Availability as preinstalled unit on new equipment or as a retrofit solution for existing systems (also suitable for third-party drives)

DriveRadar® IoT Suite for industrial gear units

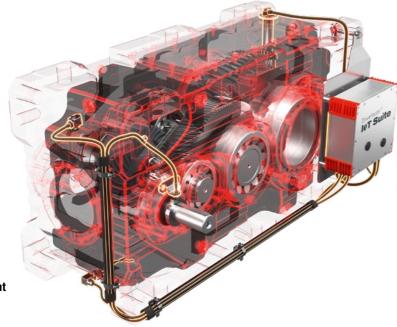
DriveRadar® for industrial gear units is an intelligent condition monitoring system that digitally records and automatically assesses gear unit data.

- Prevention of downtimes
- Reduction of maintenance cost
- Targeted troubleshooting

- Transparency from any location
- Conservation of resources

The sensor package and hardware at a glance

sensor data and sends the collected values in encrypted form to the SEW-EURODRIVE data center, where the raw data, such as oil level, vibration speed, speed, oil temperature, and ambient temperature, is analyzed and processed.



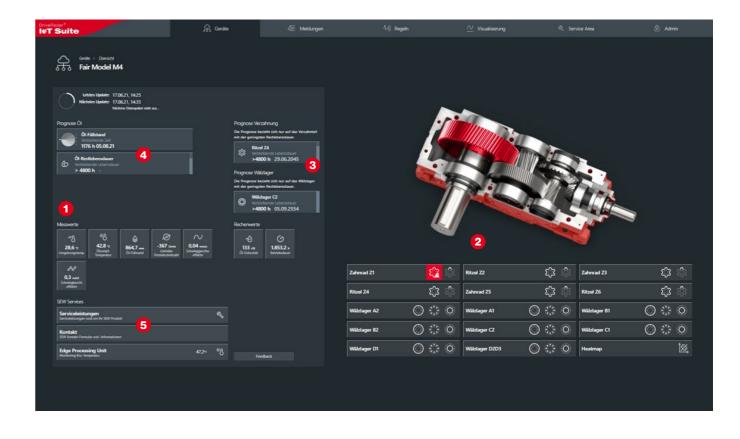
The sensor package records the operating parameters of the industrial gear unit and forwards them to the EdgeProcessingUnit (EPU). The EPU records all

Services at a glance

- Vibration analysis at constant and variable speed:
- Condition of the individual bearings and their components
- · Condition of the individual gears
- Forecast of the service life of rolling bearings and gearing: Prediction of remaining component service life as a supplement to vibration analysis
- · Calculation of oil viscosity based on the recorded oil temperature and type of oil used
- Forecast of next oil change: Prediction of the next necessary oil change based on oil condition, which is calculated in relation to use
- Oil level forecast: Prediction of time remaining until a critical oil level is reached due to a decrease or increase in the level (e.g. due to oil loss or contamination)
- Calculation of operating hours and downtimes
- Integration into the existing customer management system

How measured values and forecasts are set out in the web application

- 1 Compact overview of all relevant variables
- 2 Monitoring and display of the position of bearings and gears
- 3 Prediction of failure probability for rolling bearings and gearing
- 4 Oil level and oil change forecasts
- **5** Quick access to contact and services



- Oil level
- Vibration speed
- Speed
- Oil temperature and ambient temperature

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Services during scheduled downtimes or emergencies

Overview of the advantages

During scheduled downtime or emergencies, we offer comprehensive services designed to get your systems up and running again quickly and minimize downtime.

Our service includes

- Repair (including "to go"): Rapid and efficient repairs of SEW-EURODRIVE gear units and third-party products, along with other drive components to get your systems up and running again as quickly as possible.
- Retrofitting: Replacing existing gear units including gear units from other manufacturers – with SEW-EURODRIVE gear units, including all necessary adjustments and adaptation parts. Also, modernization and optimization of your systems for improved performance and efficiency.
- Drop-in gear units (one-to-one gear unit reproduction):
 Seamless integration of new gear units into your systems to ensure smooth and effective production.
- **Spare Parts Service:** Delivery of spare parts for SEW-EURODRIVE gear units starting from one day ex works, all the way to reproduction of all parts from third-party gear units.
- Express delivery in 1 to 15 days: Our "Industrial gear units
 to go" delivery time program means you receive urgently required
 industrial gear units within a very short time, so as to minimize
 downtime.

Benefit from our rapid and reliable service, and ensure your systems can get up and running again quickly after scheduled downtimes or emergencies.

Repair

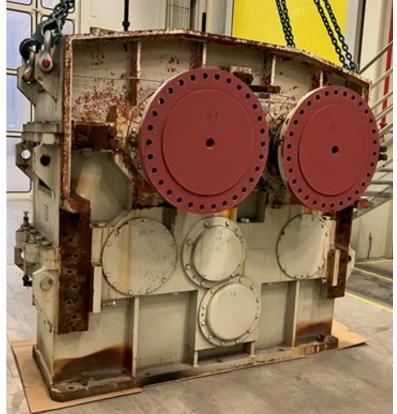
Our repair services are designed to minimize your downtime and get your systems up and running again as quickly as possible. Always reliably, transparently, and in top quality. And if you only want to restore your gear unit's functionality for a limited period of time, SEW-EURODRIVE will only repair the bare essentials as part of the emergency repair.

- Emergency repair in 1 to 3 days: For emergencies, we are ready to get your systems functioning again within 1 to 3 days.
- Repairs to go: With our "to go" repair service, you can choose between:
- SEW-EURODRIVE gear units: 2 weeks repair time
- Repair of third-party products, including cleaning and painting:
 2 weeks for bearings and seals, 3 weeks including reworking,
 5 weeks including new gearing components
- Have you already installed your replacement gear unit?
- > 10 weeks repair time

Emergency repair	Repair "to go" SEW-EURODRIVE gear units	Repair "to go" Third-party products	Standard repair
1 – 3 days	2 weeks	2 – 5 weeks	> 10 weeks







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Retrofit

By retrofit, we mean the technical conversion and replacement of existing drive technology with components from the current SEW-EU-RODRIVE product portfolio. Your requirements in terms of installation space, energy efficiency, maintainability, and any obligatory legal or normative specifications are all factored into the process.

A retrofit can involve both the replacement of individual drive components (component retrofit) and the modernization of entire machines and systems (system retrofit).

- Actual state analysis and condition monitoring
- Recording of actual dimensions (center distance, installation space, etc.) on site
- Project planning for new drives taking into account aspects such as longevity, maintainability, and energy efficiency
- Adaptation engineering for mechanical and electronic components as well as the control cabinet
- Provision of a complete drive package or individual drive components: Gear unit, motor, coupling, brake, steel frame, inverter
- Replacement and startup of drive components and peripherals by SEW-EURODRIVE
- Acceptance

Your benefits

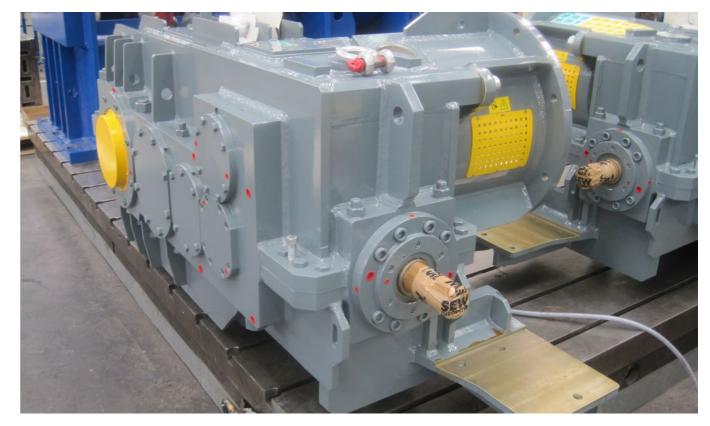
- **Optimum project planning,** tailored to the specifics of your machine or system
- Prevention of interface problems thanks to all drive components and services coming from a single source
- Reduced downtime

- Guarantee of spare part availability
- Quick, efficient startup carried out by SEW-EURODRIVE experts
- Optimization of aspects such as service life, maintainability, and energy efficiency



Drop-in gear unit

For seamless integration, we offer drop-in units that represent a one-to-one reproduction of your existing gear unit. The external dimensions remain exactly the same, while we either leave the internal components unchanged or optimize them, depending on your requirements. Thanks to this solution, we ensure smooth and efficient modernization of your system, without any adjustments being needed on your part.





16 Services during scheduled downtimes or emergencies

Spare Parts Service

You can easily request and order **spare parts for SEW-EURODRIVE gear units** via our Online Support customer portal – 24 hours a day, 365 days a year. Of course, your contact will also be happy to help you select the right spare parts in person. If you require **spare parts for third-party products**, then gearing components, shafts, etc., can also be manufactured using existing drawings or samples. Our custom part production service offers maximum flexibility and adherence to deadlines.

- **Provision** of original SEW-EURODRIVE spare parts
- Manufacture of spare parts (third-party gear units) based on a sample or drawing
- Advice and technical support, incl. error analysis and selection of required spare parts
- Provision of specific data and documents
 (certificate of origin, preference authorization, technical data and documents)
- Provision of customer-specific spare parts packages

Our production program for custom gearing components includes, among other things:

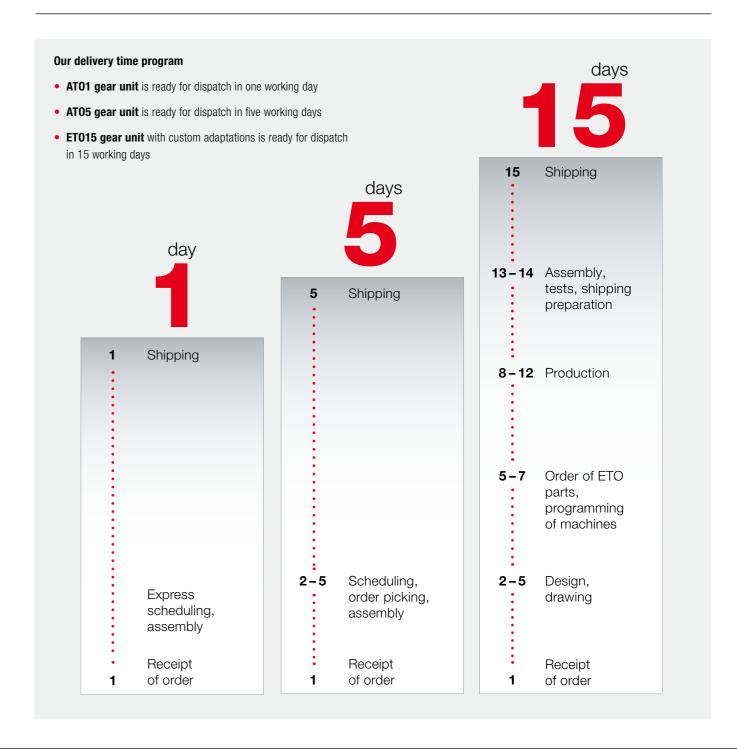
- Helical gears from Ø 10 mm to 1600 mm, module 0.3 to 20, helix angle up to 45°, international standards in DP and CP
- Worm gears from Ø 10 mm to 900 mm, module 0.5 to 20
- Bevel gears from Ø 10 mm to 750 mm, module 0.5 to 12, also with helical toothing Ø 500 mm
- **Sprockets** from Ø 10 mm to 1500 mm, pitch 5 mm to 100 mm, pitch from ¼ inch to 3 inches
- Gear racks up to module 20, also in polished finish
- Toothed hubs and involute splined shafts to DIN 5482, shafts of all types (hollow shafts, solid shafts)



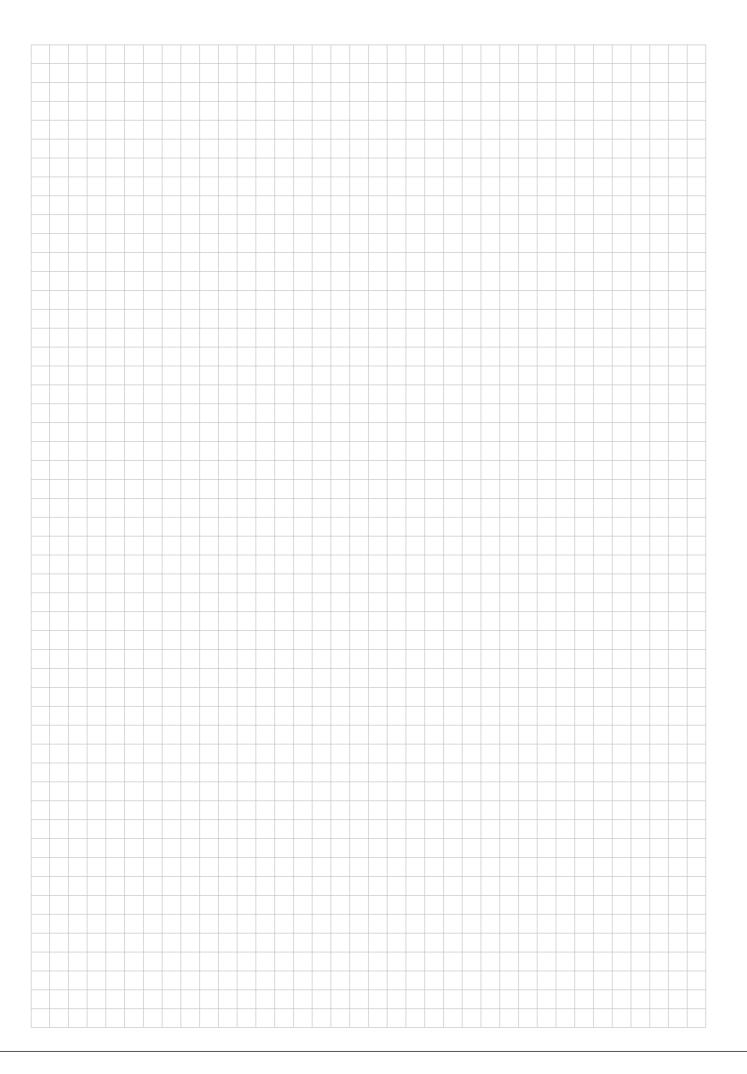
Express Delivery

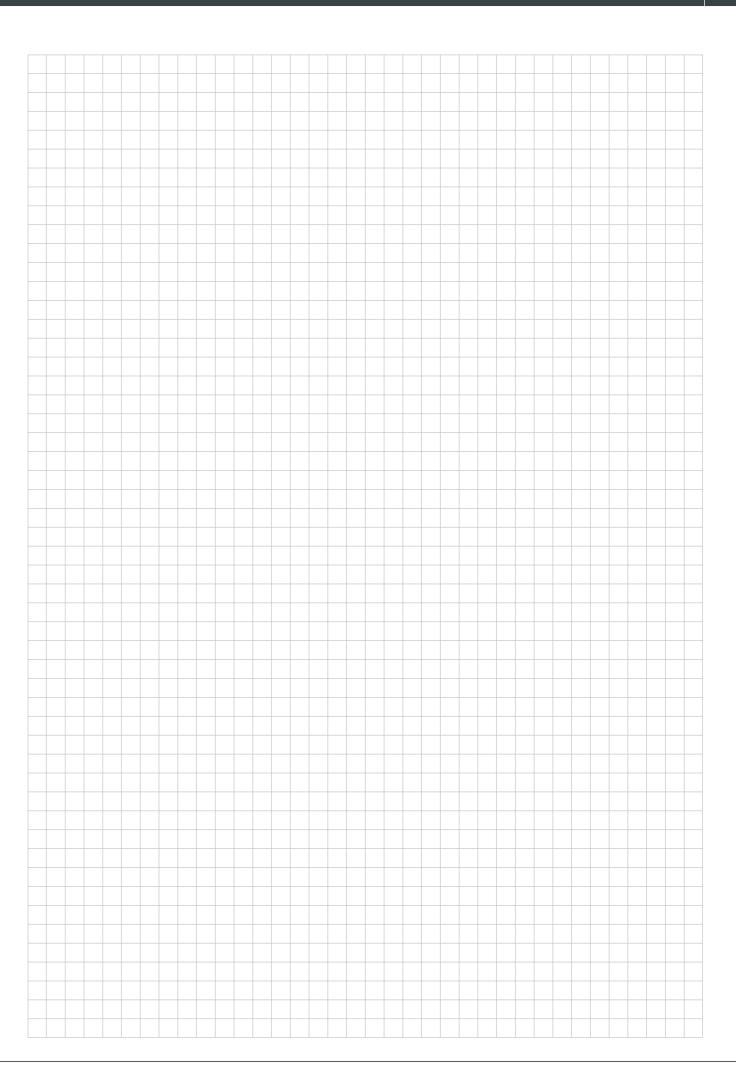
With our optional delivery time program "Industrial gear units to go", SEW-EURODRIVE can deliver industrial gear units from the X.e and P series even faster. Gear units without customer-specific adaptations (Assemble-to-Order – ATO) leave the factory just five working days after an order is placed. If your machine is down, we will even ship the **replacement gear unit in just 24 hours**. What's more, if modifications need to be made to the gear unit (engineering-to-order – ETO), these can be completed for you within 15 working days. Our "to-go program" gets your system up and running in the shortest possible time.

Gear units delivered in record time



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How we're driving the world





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