



Level measurement



Reliable and precise

Measuring fill level with elobau

For more than 40 years, elobau has been developing pioneering sensor products for the international market. Using various technologies and having the highest quality standards ensures our products always function reliably even under the most demanding operating conditions.

Modular product range

elobau offers the right solution for every application – regardless of your requirements. The modular nature of our products ensures that a suitable and cost-effective solution can be found from our wide product range.

Sustainable solutions

elobau works closely with our customers in order to find the optimum solution to your specific requirements. As all our development and production takes place in house, we can quickly, flexibly and individually meet your needs.

Our products are developed and manufactured in line with our sustainability code. Find out more at elobau.com.





Basic technologies for level measurement

Proven technologies for the field of level measurement

We can use our wide range of reliable products and technologies as the basis to find the ideal solution for your level measurement application.

Our products are based on three technologies: reed, capacitive and ultrasonic measurement.

REED

- Measuring length up to 6 m with stainless steel housing
- Measurement resolution up to 5 mm
- Working temperature range up to 120°C with plastic housing
- Working temperature range up to 180°C with stainless steel housing
- Up to 4 programmable switching points
- Integrated temperature sensor available
- Wide range of available materials (stainless steel, PVC, PA, PP, PVDF, PPS, PE)
- Configuration with programmable switching points or analogue output signal



⚡ CAPACITIVE

- Measuring length up to 2.5 m
- Measurement resolution up to 1 mm
- Calibration of the fill level by the user
- Suitable for electrically conductive and non-conductive media
- Integrated temperature sensor available

📡 ULTRASONIC

- Reliable measuring regardless of transparency, gloss, surface characteristics and material colour
- Measuring length up to 8 m
- Measurement resolution up to 1 mm
- Simple parameterization via teach-by-wire or teach-In button
- Industry 4.0 ready with IO-Link
- Digital and analogue output signals
- Extreme operating temperature range from -40 to +105 °C possible
- Stainless steel housing material (DIN 1.4404) or plastic (PBT or PA)
- Temperature compensation



Solutions for special applications

Various industrial sectors and the automotive engineering sector require the fill levels of liquids, bulk materials and other media to be reliably measured. The components are used in a wide variety of installation situations and often in adverse environmental conditions.

elobau offers a large variety of robust products both for continuous level measurements as well as for level detection in the most varied of applications. The product range also includes fuel level sensors and suction pipes that can be used to measure the fill level and simultaneously feed and return liquids.

Customised products at the push of a button and individual solutions

Our product configurators enable you to configure the right product for your application at the press of a button. You can select from various materials, define dimensions and cable lengths, select certain connections, or define measurement ranges.

elobau also offers maximum flexibility when it comes to unique requirements for assembly situations, environmental impacts, or media resistance. We offer mechanical construction, software development, production, and a test laboratory from a single source, allowing us to develop customised solutions in partnership with you. Contact us to find out more.

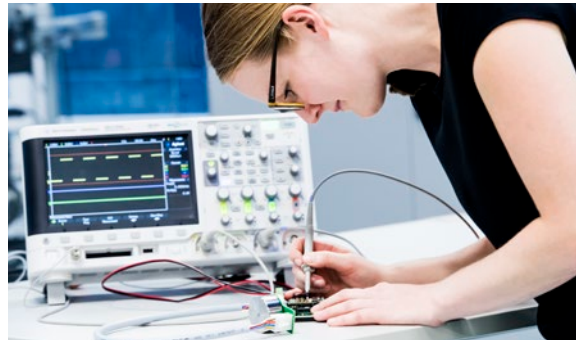
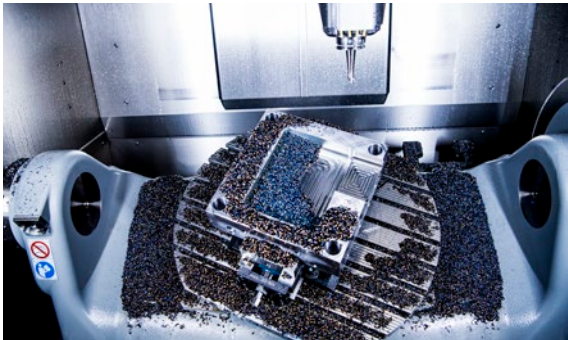
Our products for level measurement – your advantages:

- Wide variety of materials for various resistance requirements available as standard
- Temperature range from -40 °C to +180 °C
- Protection class up to IP69K
- Measurement lengths up to 8 m
- A wide range of cable materials and connectors are available
- Various analogue and digital output signals are available with continuous measurement (current, voltage, resistance, IO-Link)

Our quality promise

Our vertical integration of 90% is above average for the industry. All products from elobau are TÜV-certified and manufactured pursuant to ISO 9001:2008. But our own standards of the quality of our products are higher than those specified in any regulations. Our own testing and inspection of all products, and quality management processes ensure that every detail is just right at the end. You can count on real „Made in Germany“ quality in every single component of the final product.





Customer-specific solutions

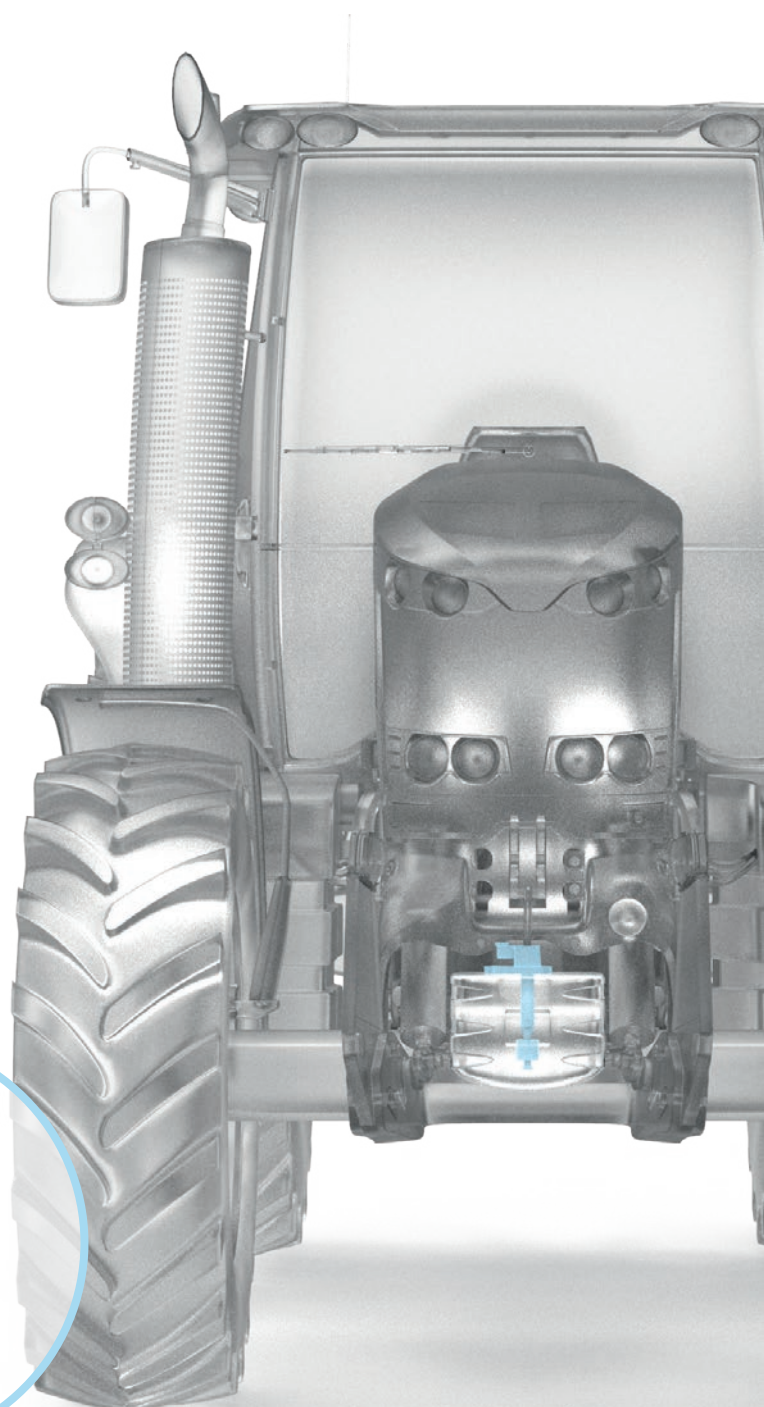


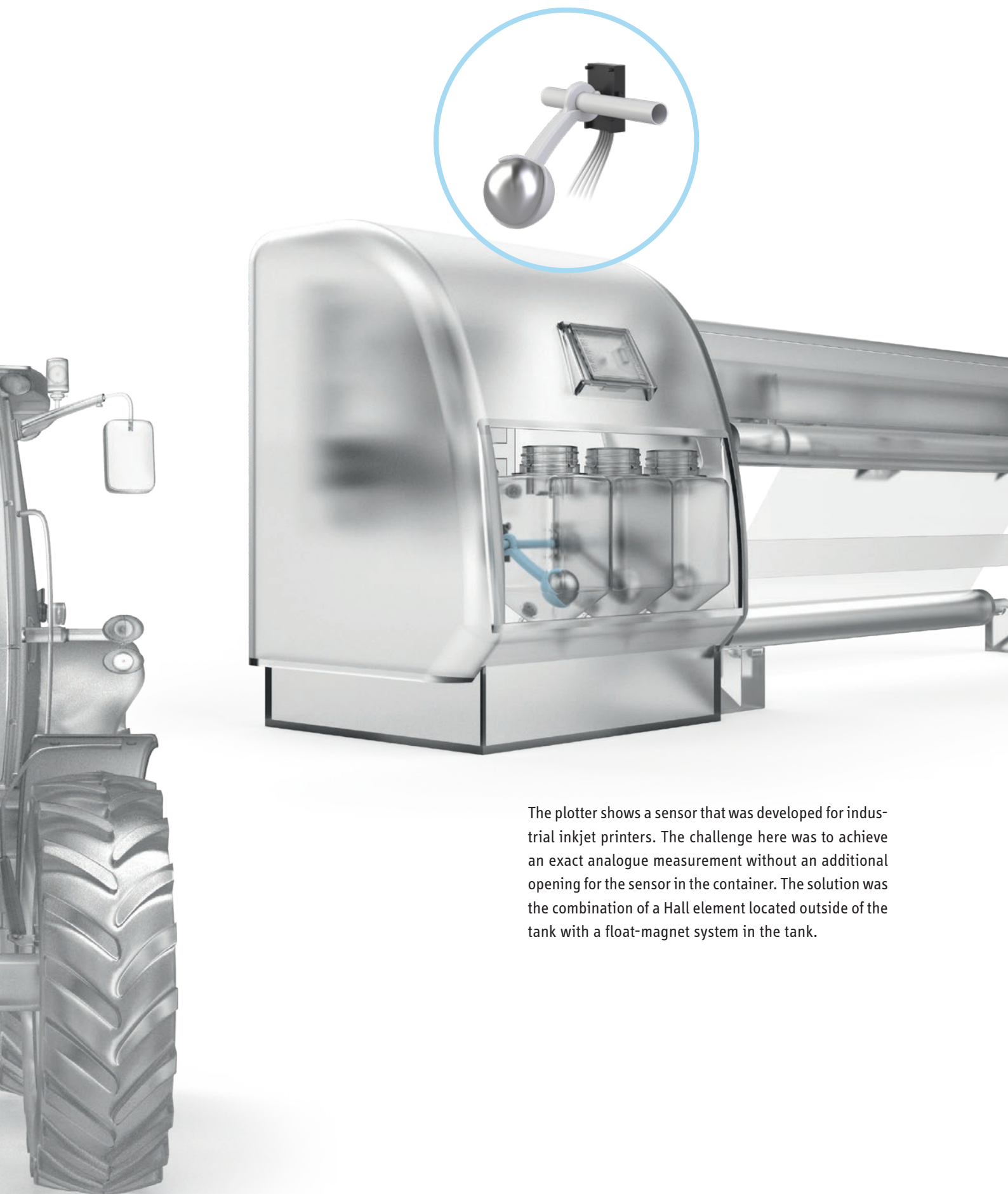
elobau products are developed for your requirements

elobau develops and manufactures products that are fully customised to our customers requirements. We have already produced thousands of customised solutions over four decades. Our customers include manufacturers from the areas of medical and dental, semi-conductor, printing, food and packaging industries, automotive engineering, and consumer goods amongst others.

elobau is a specialist in the use of contactless sensor technology. Our products are extremely versatile through the use of various technologies. Our experienced team of developers apply new approaches and develop new solutions from the existing standard solutions.

For the off-highway vehicle sector, we developed a sensor for monitoring gear oil in engines. Due to limited installation space, the customers requirement was for a very narrow flange and the smallest possible installation height. At the same time the sensor needed to be of a robust construction and provide a long service life.



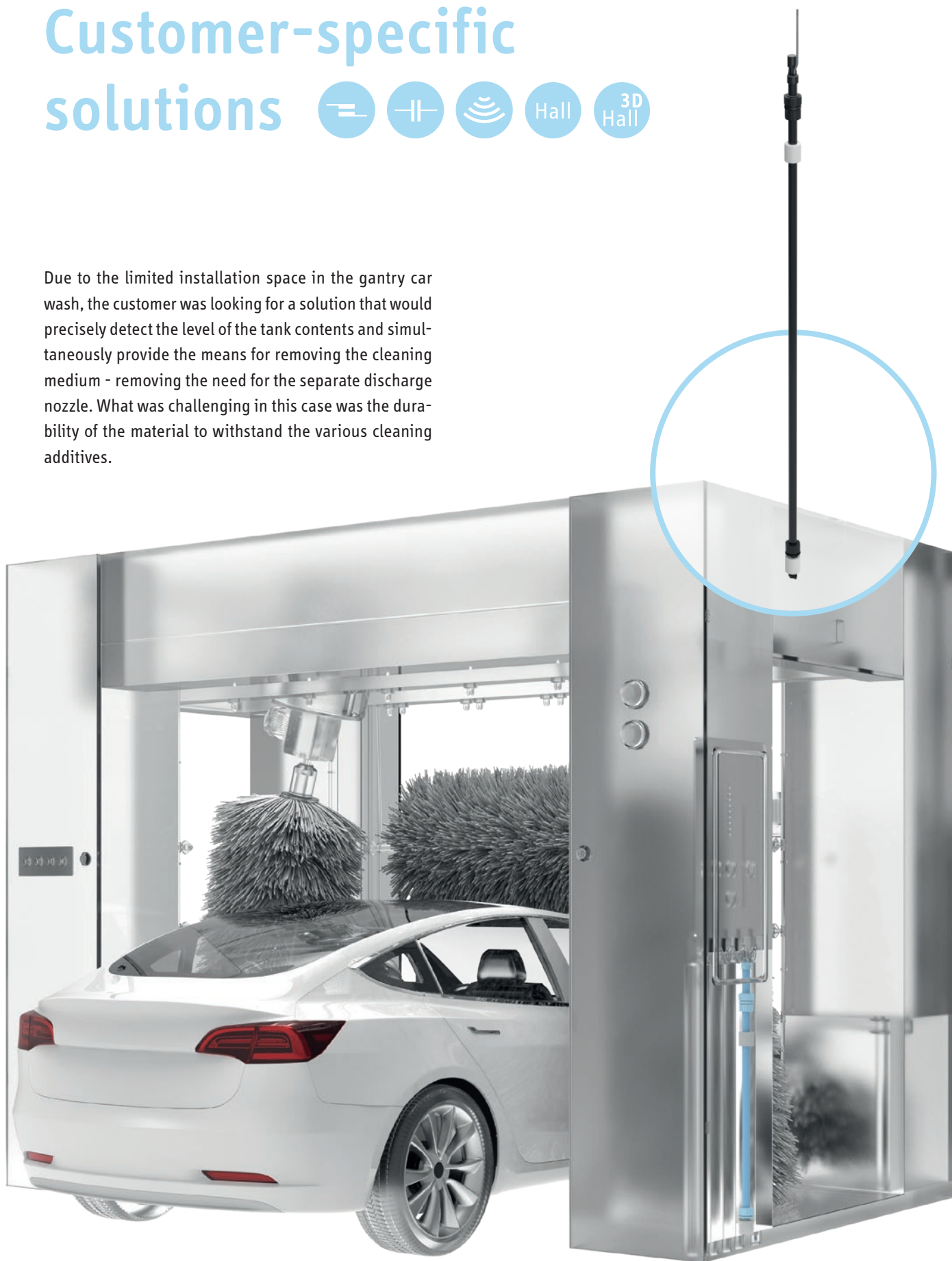


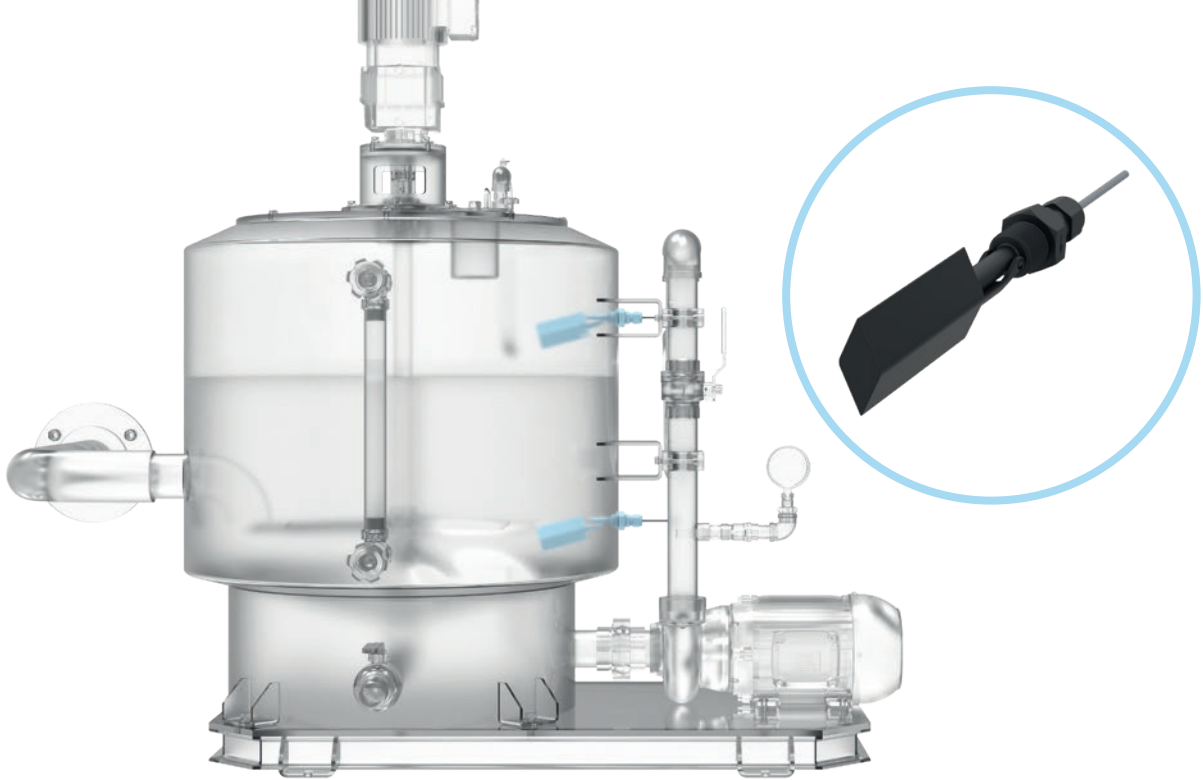
The plotter shows a sensor that was developed for industrial inkjet printers. The challenge here was to achieve an exact analogue measurement without an additional opening for the sensor in the container. The solution was the combination of a Hall element located outside of the tank with a float-magnet system in the tank.

Customer-specific solutions

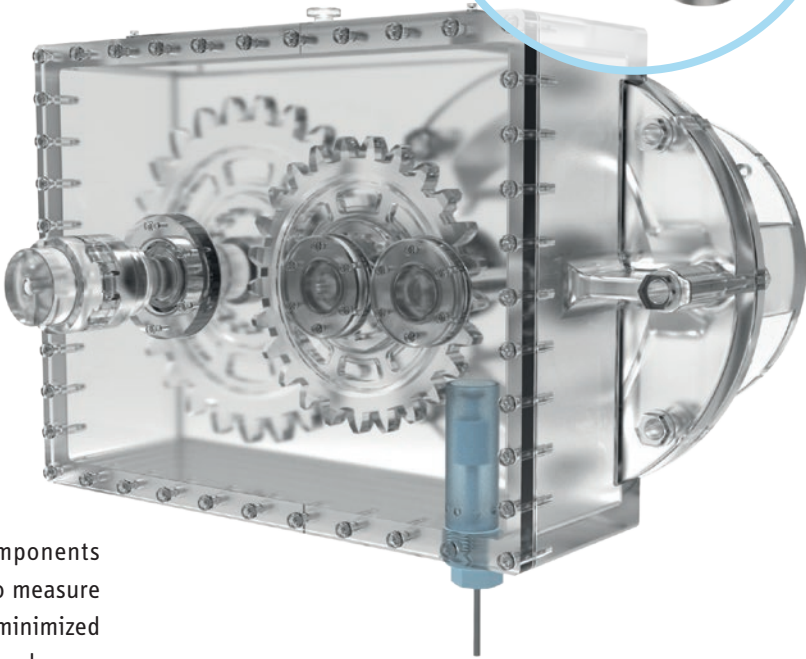


Due to the limited installation space in the gantry car wash, the customer was looking for a solution that would precisely detect the level of the tank contents and simultaneously provide the means for removing the cleaning medium - removing the need for the separate discharge nozzle. What was challenging in this case was the durability of the material to withstand the various cleaning additives.





To ensure reliable level detection in foaming media permeated with solids, a float switch side mount with a special float geometry was developed for the customer. The switch also had to be resistant to temperature fluctuations and the atmospheric pressure in the tank.



The constant movement of the internal components creates turbulence, which makes it difficult to measure the level of the lubricant. The turbulence was minimized through the attachment of a specially developed surge pipe to the level sensor, resulting in a permanent solution that could also be used for retrofitting existing systems.

Customised solutions from the standard product line



elobau's customised solutions from standard products

Flexibility is the key to elobau's success. For us, flexibility means that we can adapt existing products to fit your needs. A customised solution is created without a complex development process.

Typical modifications include special processing and sealing, materials for high-temperature sensors and various connectors being available. The size of the fluid level sensor can also be adapted up to a length of 6m.

elobau's customised solutions offer the following advantages:

- Various materials available
- Mix of materials possible
- Various threads available
- Various flanges available
- Up to 20 switching points or analogue output signal
- Up to 250 V, 3 A and 100 W
- Up to 33 bar
- Temperature range from -40 to +180 °C
- Various connector types, e.g., M8, M12, AM, Deutsch
- Low installation height enables reliable leakage monitoring
- Connection boxes for self-wiring
- Up to IP69K

Use our online configurator for the specification of your level sensor at www.elobau.com → level measurement





Available materials

- PVC
- PP
- PA
- PE
- PVDF
- PPS
- NBR
- Stainless steel
- Aluminium
- Brass

Mechanical connection

- Metric thread
- NPT thread
- Inch thread
- Flange
- Customised

Electrical connections

- Cable outlet
- Connector
- Connection box

Standard products for nearly every application



elobau's effective, reliable and cost-effective solutions

Are you looking for a particularly cost-effective solution for your level measurement requirements? The elobau product range offers a broad selection of standard products that can be used in various applications.

Our online configurators give you a simple and fast selection from a wide range of individual components. You can find the right product in just a few clicks.

Level detection

Limit-level float switches offer an cost-effective solution for overflow protection or for dry-running protection of pumps. The design, material, housing, switching points and connectors can all be individually selected.

Continuous level measurement

Continuous fluid level sensors provide a constant signal over the entire measurement range that corresponds exactly to the fill level. This signal can be generated through the use of reed, capacitive or ultrasonic technologies.





Removal and dosing with integrated level measurement

elobau has fuel level sensors and suction pipes for measuring the fill level, and simultaneously filling and removing. These unique solutions have the advantage that only one tank opening is necessary.

Ultrasonic level detection

Ultrasonic sensors are the ideal solution for reliably and precisely detecting the fill level of liquid and solid media in a container. Nearly all materials can be detected with ultrasound, regardless of whether they have a glossy, matt or even transparent surface. The range of sensors available means they can be used in countless applications - with precise measurement of distances up to 8000 mm.

Level measurement with ultrasound



Precise, flexible, and reliable - ultrasonic sensors from elobau

elobau ultrasonic sensors are the precise, versatile and reliable solution for every application. Both in industrial and challenging off-highway environments, the sensors are the ideal choice, thanks to the robust design of the housing. The contactless technology guarantees the precise detection of liquid, solid, granular or powdery substances - even in extreme environmental conditions. Vibrating sound converters help to prevent media from adhering to the sensor, so even in the event of precipitation, dust, smoke and extreme temperatures, data will be reliably delivered. With a measurement range of up to 8000 mm, the elobau ultrasonic sensors set the standard.

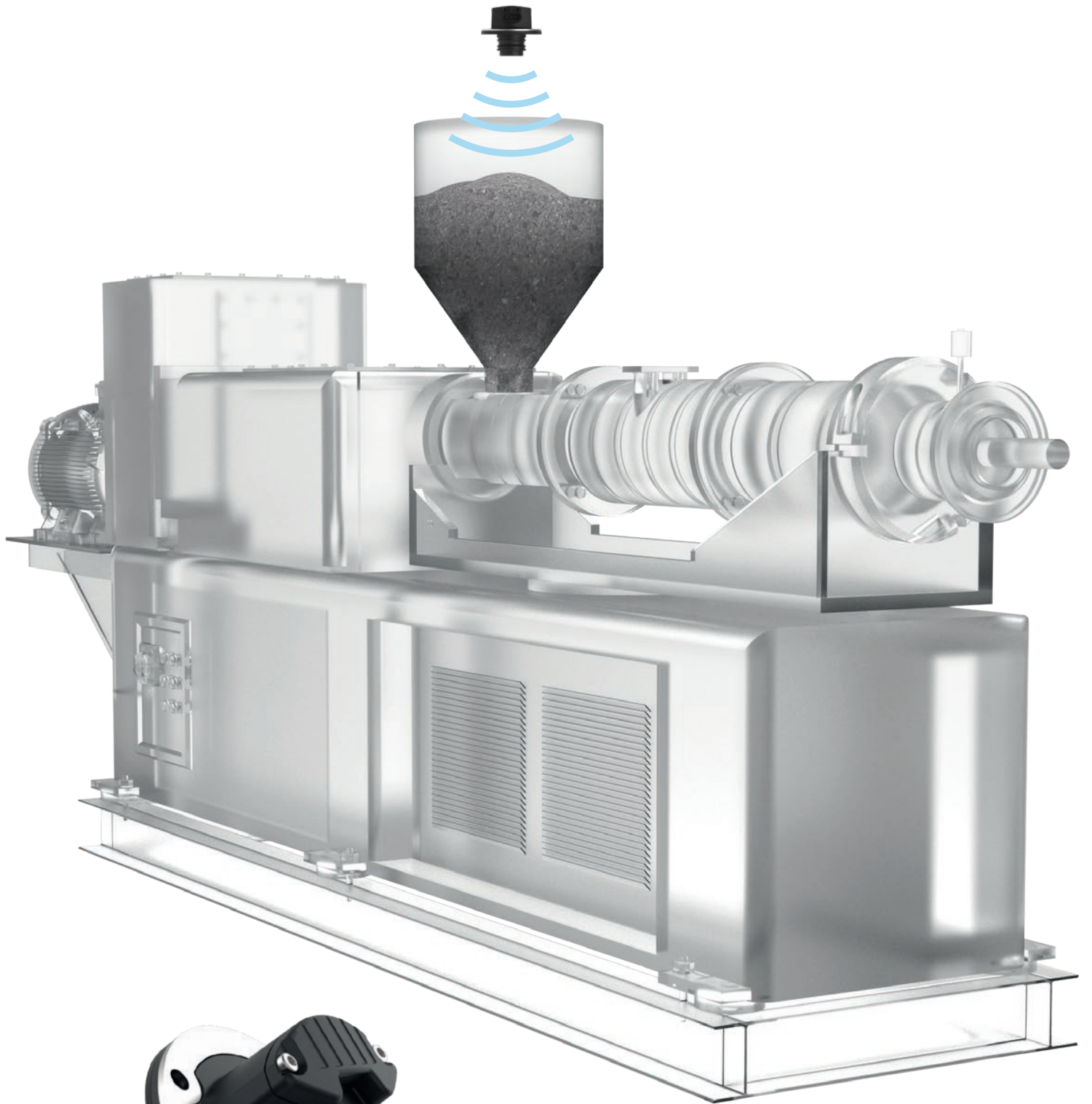
IO-Link

elobau ultrasonic sensors are IO-Link compatible and, thus, „Industry 4.0 ready“.

IO-link makes it possible to drive digital networking and communicate from the control down to the lowest level of automation - the sensor level. IO-Link is a standardised and universal interface based on point-to-point connection that can communicate with all common fieldbuses. With simplified wiring, device diagnostics and a reduction in standstill times through simple configuration, automation can be designed even more efficiently with IO-Link.

Use IO-Link and make your machines fit for the Internet of Things. IO-Link sensors offers a number of advantages, such as lower installation costs thanks to simplified wiring, or condition-based maintenance for higher system availability.





Programmable level measurement

Temperature and filling level indicator combined in one display

elobau's all-round fluid level sensor offers a built-in LCD display, including a button for programming. This allows the user to configure up to three discrete switching points with temperature output or four discrete switching points and one analogue signal for continuous measurement.

Through the use of a riser made of stainless steel, the sensor can be used in nearly all types of fluids. For use in less-aggressive media, the riser made of plastic is an economical solution.

features of elobau's programmable level measurement include:

- Various materials available
- Digital and analogue output signals
- Individually selected switching points via the analogue output signal with a resolution from 5 to 35 mm
- NPT or inch thread, 2" internal thread available
- Various cables and connections are available
- Designed for use in a wide range of fluids
- Optionally available with rotatable head



Output signals

- Analogue
- Digital
- Analogue + Digital

Electrical connections

- Cable outlet
- Connector
- Connection box

Available materials

- PVC
- PP
- PA
- PVDF
- Stainless steel

Can be used in aggressive media

- Oil
- Diesel
- Water
- Chemicals
- Cleaning agents



elobau

Included on our delivery notes are components, systems and solutions for off-highway vehicles, machine safety and level measurement. Everything based on contactless sensor technology. Everything customised. Everything of high quality.

What doesn't appear on our delivery notes: future security. Our expertise is included in the purchase of every product. Everything that our company does is focused on being a reliable partner for the long term – for our customers, employees and for our ecological and social environment. From the way in which we develop and produce our products to our view of the holistic responsibility of a company.

As an expanding, globally active, family-run foundation company with more than 800 employees, we develop and manufacture sensor technology and operator interface controls for the industrial machine and off-highway vehicle sectors. Our high-quality products are characterised by a high vertical range of manufacture in Germany. With our innovative, contactless sensor products, we support our customers worldwide in manufacturing industrial machines and off-highway vehicles that set standards in terms of performance, operating comfort, safety and quality.

Your partner. Worldwide.

Select your direct contact person

www.elobau.com ▶ Contact



We produce in a
carbon-neutral manner.



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