



CASE STUDY

Strategic communication and collaboration saved VEGA testing time and costs

VEGA brought its latest advanced sensor, VEGAPULS 6X, to market swiftly supported by a strategic testing strategy and laboratory network from UL Solutions.





VEGA, a global leader in sensor innovation

When it comes to industrial measurement across a range of chemicals and conditions, choosing the right instrumentation is critical to ensure up-to-the-moment measurement of liquid and solid chemicals, including hazardous or corrosive materials at any temperature.

VEGA, based in Germany, is a global manufacturer of process instrumentation sensors that specializes in pressure measurement and level measurement technology. The company is committed to the development of innovative measurement technology that offers incredible precision, ease of use and other advanced features.

VEGA's high-performance sensor equipment is used by customers around the world, including in these industries:



Chemical manufacturing



Drinking water supply systems



Food and beverage plants



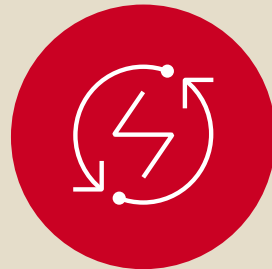
Landfills



Mining operations



Pharmaceutical manufacturing



Power generation



Sewage treatment plants



Ship and yacht building



and more

VEGAPULS 6X – where precision measurement and customer customization meet

VEGA's new 80GHz sensor, VEGAPULS 6X, represented a breakthrough for the company and industrial market. This unique product combines reliability and accuracy, with endless possibilities for customization based on a customer's existing processes. VEGAPULS 6X operates in a range of conditions.

Level Probing Radar (LPR) and Tank Level Probing Radar (TLPR) sensors may require approval or certification before they can be sold and used since they utilize a specific range in the wireless frequency. Due to the risk of unintended electromagnetic interference, testing may be required to demonstrate compliance with local electromagnetic compatibility (EMC) before launch. Additionally, EMC testing aids manufacturers in identifying design issues early to streamline product development and speed go to market efforts.

Learn how UL Solutions worked with VEGA to launch this new product in key markets worldwide, with more than 50,000 units sold annually.



UL Solutions capabilities

Providing global customers with EMC testing support

“Level measurement using radar technology is a unique application,” says Klaus Mayer, specialist for product compliance and safety at VEGA. “Not many approval agencies have the accreditation and connections to make worldwide market access possible.” However, the UL Solutions laboratory in Stuttgart was well-suited to perform testing for VEGAPULS 6X. Additionally, the company has other laboratories, including at Basingstoke, UK, capable of performing the same testing to accelerate market access.

VEGA has been a UL Solutions customer for more than a decade, reflecting the company’s commitment to continually improving its product portfolio to meet the changing needs of its industrial base. “Our team has developed a positive relationship with VEGA and we were pleased to provide independent testing services for the company’s newest innovative sensor,” says Thomas Krömer, senior sales executive, Energy & Industrial Automation at UL Solutions.

UL Solutions has an advanced EMC and radio performance testing laboratory conveniently located in Stuttgart, just a few hours from VEGA’s corporate headquarters, as well as the heart of the industrial and automotive market.

This state-of-the-art facility serves a rich array of customers in the DACH region (Germany, Austria and Switzerland) and is focused on information technology testing, including wireless technologies such as Bluetooth and high-frequency radar applications. The DAkkS-accredited also features expanded capabilities for medical devices and lighting equipment.

Stuttgart, Germany Laboratory Details

- Specializes in EMC and radio testing
- 7,500 sq ft with 11 shielded rooms
- Stable, reproducible test configurations
- Interference-free environment
- Full DAkkS accreditation

Safety science strength and support

With a rich background in testing for EMC and radio, UL Solutions constantly refines safety science services to keep up with the constant developments in wireless technologies in many industrial applications, including using radar to measure liquids in tanks.

As a global safety science leader, we serve customers as they work for a safer, more secure and sustainable world through:

- Expert project management led by skilled engineers
- Thorough understanding of market access requirements
- Carefully coordinated testing strategies to streamline testing activities and maximize efficiencies
- Dedication to enhanced communication with customers to set, manage and exceed expectations

The challenge: multiple markets, multiple frequencies

To gain market access, VEGAPULS 6X needed to demonstrate compliance with safety, EMC and wireless testing. But this process was anything but straightforward.

Here are some key challenges VEGA needed UL Solutions to overcome:



A variety of high frequencies:

VEGAPULS 6X would need to be able to operate at various high frequencies in different regions around the world. For example, Europe and North America allocate the 75-85 GHz frequency range for industrial applications, Brazil uses 76-81 GHz, and India employs 76-77 GHz.



Customizable product configuration:

VEGAPULS 6X can be outfitted to suit customer needs in different measuring environments by swapping housings and antennae which can be attached to the product. This customizable approach is convenient for the customers, but can present significant difficulties in testing, as different permutations of accessories can impact performance.

UL Solutions needed to optimize a testing program to account for a broad variety of housings and antennae. “We designed a clever testing and certification strategy to quickly align with the client’s certification needs in the European Union, Canada and the U.S.,” says Jakob Reschke, senior project manager, Consumer, Medical and Information Technologies at UL Solutions.

Managing complex projects, featuring multiple services and market access requirements, is where UL Solutions excels. “Our project managers orchestrate testing activities to allow better process flow, consider efficiencies throughout the whole process, and free the customer to deal with the management of multiple services,” says Joaquin Gomez Serrano senior product/service specialist, Consumer, Medical and Information Technology at UL Solutions.

Ultimately, through comprehensive safety science testing, VEGAPULS 6X demonstrated compliance with these wireless standards:

- U.S. Federal Communications Commission regulation, FCC Part 15 Subpart C, 47CFR Part 15.256
- U.S. Federal Communications Commission regulation, FCC Part 15 Subpart C, 47CFR Part 15.31(q)
- Canada’s RSS-211 Issue 1
- Canada’s RSS-Gen Issue 5
- European Union’s EN 302 729-2
- European Union’s EN 302 372-2

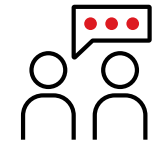
Through the testing process, VEGAPULS 6X gained access into key markets, including the U.S., Canada, Taiwan, South Africa and more.

Building trust through communication and accountability



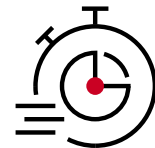
“Our testing approach saved money and helped us deliver on a tight timeline,” says Mr. Reschke. “Even when some challenges appeared, we worked together with VEGA to resolve them and meet the deadline.”

Jakob Reschke - Senior Project Manager - UL Solutions



This seamless, productive relationship was fostered through a communications approach that supported the coordinated testing strategy. BI-weekly calls helped keep the project on track, keep customers informed and work through issues as a team. “During these calls, we were able to keep the VEGA team informed about progress, timelines and open work items,” says Mr. Reschke.

Jakob Reschke - Senior Project Manager - UL Solutions



“UL Solutions met our high expectations for this project — which is not often the case with other approval agencies we work with,” says VEGA’s Mr. Mayer. “During this project, UL Solutions clearly communicated and met our timeline which was crucial for a successful product launch.”

Klaus Mayer - Product Compliance & Safety - VEGA

Let's talk

UL Solutions can support high-frequency testing in Europe and additional global locations. Manufacturers can enjoy convenient access to testing professionals working in local time. Strategic testing coordination helps streamline testing activities and meet timelines for even the most complex sensor products.

To get started, visit [UL.com/services/testing/emc-testing](https://www.ul.com/services/testing/emc-testing)



[UL.com/Solutions](https://www.ul.com/Solutions)