

# Digital age vacuum technology

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*No matter the industry, employees have come to expect technology to boost the efficiency of whatever area they primarily work in. In the assembly line, workers are now interacting easily with robots in order to quickly assemble complex pieces of machinery. Autonomous trucks help shipping freight between factories and their respective distribution centers in a timely manner. Mobile devices help augment the efficiency of doctors in the healthcare setting. It's only natural that technology, particularly mobile technology, makes its way from people's everyday life into their place of work. For leading vacuum technology manufacturer ULVAC, the launch of its Smartphone-Direct Pirani Gauge "SWU10-U" is a key technological advancement that befits the digital age.*

ULVAC, Inc., headquartered in Chigasaki, Japan, was founded on August 23 of 1952 as the Japan Vacuum Engineering Co., Ltd. The original intention of the company was the importing and selling of various types of vacuum equipment. By 1962, the company adopted its current name and continued an inspiring story of innovation and quality products within the vacuum technology space.

The success of its technology as well as the quality of its products led to its gradual expansion across Asia, including a manufacturing base of vacuum pumps in China, the

establishment of a local subsidiary in South Korea and a Taiwan hub. Through a joint venture, the company entered the U.S. market in 1982.

Today, ULVAC employs a consolidated workforce of over 6,400 employees at dozens of locations throughout Europe and Asia, with President and CEO Setsuo Iwashita as their business leader. Through strategic collaboration projects, the company has a presence in some of the leading research institutes in the world, including centers in USA, Europe, Australia, South East Asia and China.

In a sign of true innovation in the market, ULVAC recently released its Smartphone-Direct Pirani Gauge "SWU10-U," a new piece of technology designed to make vacuum measurement easier in any number of commercial and industrial contexts. Thanks to its innovative design and capabilities, customers can check the degree of vacuum simply by connecting a mobile device to the SWU10-U, without the need for a dedicated power supply or an additional on-board display.

"We think there is some impact in the sense that SWU10-U is epoch making," said Mr. Atsushi Kuwatani, of ULVAC, Inc's Measurement Instruments Department, Components Division. "SWU10-U is an unprecedented vacuum gauge. In fact we have just received good response since launch."

The mobile operating system of the technology is compatible with Android devices, through the smartphone app UL-MOBI, which is available for download from Google Play. The sleek app is capable of displaying accurate, real-time pressure data and trends. Data logging also ensures customers are able to analyze their data later.

ULVAC, which made the first batch of units available to customers on October 31 of 2019, said it expects to sell over 5,000 units on the first year since launch, and 30,000 pcs after the three year mark. Sales price starts from 49,800 yen (approximately, 415 EURO). The unit has seven different types of fittings available, including NW16 and R1/8.

As this is the company's first attempt at creating a device with these specific



characteristics, more trial and error will be required, said Mr. Kuwatani. Though the company has not yet decided if it will expand these capabilities to other products, but it feels potential in it.

“Because function is allocated in smartphone app, we can improve it more flexibly,” said Mr. Kuwatani. “And by using smartphones which customers have already have, we can also reduce monetary burden of customers. There is no doubt that we will have greater opportunity to use smartphone regardless industries. We will continue positive discussion.”

The company’s strength is found in its ability to meet market needs regardless of the type of product within the vacuum space. The company manufactures vacuum gauges, helium leak detectors, process gas monitors among others as vacuum measurement instruments. In the field of vacuum pumps, ULVAC makes oil rotary pumps, dry pumps, mechanical booster pumps and turbo molecular pumps.

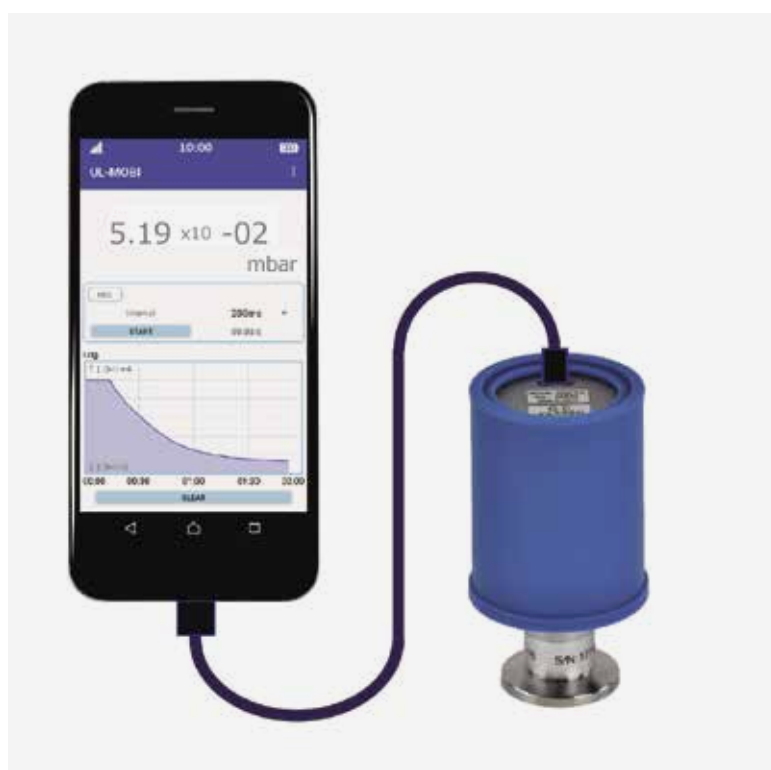


“We also have power supply for coating and ellipsometer,” said Mr. Kuwatani. “There are no makers which have such a wide product lineup of vacuum components except for ULVAC. From every angle, we can propose to application where vacuum technology is used.”

Going forward, the company’s field of opportunity far outweigh their potential challenges or areas of improvement. Technologies which support smart society, where all industries and living environments are electrified, represent an important and growing market for ULVAC, and demand for new

semiconductors and electronic devices are increasing in order to realise the concept of a smart society. Next generation semiconductor memory, photovoltaics, communication device, sensor, battery and display are key products within this context.

“Furthermore, to respond to social issues such as global warming and climate change, our research and development bases are establishing foundations for sustainable growth with aiming at acquiring advanced technologies,” said Mr. Kuwatani.



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