

# NEW MARKETS, NEW ANALYSES

The rising number of Next Generation Products (NGP) is reflected in development projects at the Hauni subsidiaries Sodim and Borgwaldt KC, which specialize in metrology equipment for the tobacco industry. "The measurement of smoke behaviour and analysis of smoke condensate, gas phase or trapped aerosol is just as relevant for large and small producers of e-cigarettes, liquids and Tobacco Heated Products (THP) as it is for traditional cigarette manufacturers," explains Thomas Schmidt, Director Scientific & Technical Affairs at Borgwaldt KC. "The problem is that these new user devices do not fit easily into traditional analytical instruments, and the formats are less standardized than those of conventional cigarettes. This is why our measurement and test units in this segment are – almost without exception – made-to-measure products designed for individual customers."

These are based on a range of aerosol-collecting vaping machines, which Borgwaldt KC has developed using its decades of experience in manufacturing high-performance test units for the tobacco industry. The company is reporting growing demand for its instruments which incorporate various numbers of vaping channels including bottom activation as well as further applications, e.g. a cell contamination unit for in vitro toxicological assessments, an inert gas box for oxygen exclusion studies, a pressure drop tester for e-cigarettes and Heat-Not-Burn products, and an aerosol detection system.

Hauni's French subsidiary Sodim has also responded to the enormous variety of products in the growth market of e-cigarettes. The SPA-D smoking puff analyzer for determining the smoking topography of e-cigarettes is available in both portable and desk-top versions. "The puff analyzer presents its results on a PC monitor as a graphical real-time display. This shows pressure and flow for the entire smoking cycle and each puff as well as related volume characteristics such as puff duration and elapsed time," explains Christine Camilleri, Head of Sales and Marketing at Sodim. "When the smoking has been completed, the results are automatically recorded and stored in an electronic smoking profile file." The SPD smoking puff duplicator allows the operator to duplicate human smoking recorded by the smoking puff analyzer and produce standardized smoking puffs, square puffs and sinusoid puffs. Sodim's e-cigarette portfolio also

**Detail of a Borgwaldt KC vaping machine with aerosol detection system (ADS), sample support and bottom activation unit (left).**

**Portable smoking puff analyzer.** This portable measuring instrument records time, puff duration, volume of smoke inhaled and pressure drop (right).

*The rapidly growing market for alternatives such as e-cigarettes and Tobacco Heated Products (THP) has created **A NEED FOR NEW INSTRUMENTS** in manufacturers' testing laboratories.*

includes a tailor-made sample holder for all e-cigarette instruments and the CIGARLAB-PD pressure drop analyzer for e-cigarettes. "The CIGARLAB-PD is used to measure the standard pressure drop of e-cigarettes by measuring the difference in pressure between the two ends of the sample while a constant flow rate is passing through it," explains Camilleri.

#### Preparation for regulation

Thomas Schmidt is convinced that the growing demand for measurement instruments for alternative tobacco products is still in its infancy. "Regulation is inevitable in this diversified and rapidly growing market for NGP. In fact, we expect it to come sooner rather than later. Tomorrow's vapour industry will be faced with regulations on vapourizers, e-liquids and increasingly THP product emissions. Then, at the latest, it will be essential for manufacturers and testing laboratories to have access to precise measurements. The diversity of these products and the technologies they use has increased dramatically. With our innovative metrology solutions, manufacturers can ensure they are well-prepared to comply with future regulations." =

