

InstaHeat signs first customer deal under new ohmic heating standards

Following its influence on the change of the global regulation for the ohmic heating, InstaHeat is advancing the development of its Heatflow device for a range of appliances, including coffee machines. The startup has signed its first commercial deal with Rex Royal, one of the largest coffee machine manufacturers.

[InstaHeat](#)'s founders, Fabian Dietschi and Alexey Gromov, recently obtained a seat to represent Switzerland at the International Electrotechnical Commission (IEC), which develops and publishes international standards for electrical technologies to ensure safety and efficiency in the design, manufacture, and use of electrical products and systems worldwide. After extensive work and consultation with experts, they secured unanimous approval from all IEC member countries for the safety of their ohmic-heating-based technology for heating conductive liquids.

Ohmic heating generates heat by directing electrical current through a liquid as it flows between electrodes placed along a pipe, converting electrical energy into heat instantaneously and homogeneously within the liquid and eliminating the need for additional heating elements. Historically, safety concerns about explosion and electrocution limited the acceptance of such systems, but with recent changes to international regulations, ohmic heating of liquids is now formally recognized as safe when designed and operated according to the new safety standards which are now part of the global IEC framework.

“When we began industrializing our HeatFlow device, we discovered that Ohmic heating was globally prohibited by one sentence in the existing standard: ‘Electrodes shall not be in contact with liquids’ because electrodes in direct contact with liquid can create explosive gases through electrolysis, and an energised liquid can pose an electrocution risk. We have therefore created a fully galvanically isolated heating chamber, where high frequency energy is transferred through an isolating barrier. This way the high frequency eliminates the explosion risk, and the isolation ensures that the liquid never touches a component directly in contact with the mains supply, removing the electrocution risk”, explained the founders.

Founded in 2019 in Zurich, InstaHeat is currently advancing its patented, ohmic-heating-based industrial flow heater that heats conductive liquids directly via electric current, eliminating conventional heating rods. The company's miniature flow heater integrates easily into compact equipment.

New customer to integrate flow-heater into coffee machines

InstaHeat's long-standing partner, Rex Royal, has committed to purchasing the startup's flow heaters for its new S3-series coffee machines. This achievement follows several years of close collaboration, during which Rex Royal provided access to its testing environment and ongoing feedback on critical factors for professional coffee machines, including reliability, serviceability, and energy efficiency. “We continue to work closely together and expect this

partnership to expand as the technology rolls out into further product categories,” says the InstaHeat team. Rex Royal produces machines like the S500, S300, and S2 series for high-volume settings such as hotels, restaurants, offices, bakeries, and petrol stations, featuring advanced features like PowerSteam milk frothing and precision grinders. These cater to professional needs with capacities up to 58 liters of hot water per hour and customizable brewing.

Besides [Rex Royal](#), several international appliance manufacturers in Europe and Asia are currently testing prototypes that integrate InstaHeat’s HeatFlow system. Moreover, InstaHeat is exploring applications beyond coffee, including milk treatment, water-dispensing equipment, and certain laboratory and medical devices where fast, precise, and sterile heating is essential.

The company and its team of seven have raised approximately CHF 500,000 in equity and CHF 1 million in competitive grants to date.

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