

Member News

LIST AND ROTAREX WORKING TOGETHER TO REDUCE GAS POLLUTION

Luxembourg company Rotarex is working with the Luxembourg Institute of Science and Technology (LIST) to develop high-performance valves for strategic gases with a high level of purity.

The gases used in semiconductors must have the highest possible level of purity. This is an area of particular expertise for Rotarex, a world leader in the production of technical valves for this sector. The continent's dependence on Asia for electronic chips has recently spurred Europe to implement the European Chips Act, and this semiconductor market demands ever more reliable high-performance valves, above all to control the microparticle emissions which are the result of the physical and chemical impact on metals of technical gases.

Working together with LIST's materials teams, Rotarex, a company based in Lintgen, is looking to develop a new form of coating to protect these valves. The company, which celebrated its 100th anniversary three months ago, is keen to offer its customers this new solution, and in order to achieve this signed a collaboration agreement with LIST on Tuesday, 13 December.

This agreement provides for an initial two-year project during which LIST, which has more than 15 years of expertise in the field of surface treatment, will work on two types of surface treatment, using two different deposition technologies. LIST will then provide Rotarex with valves treated using these new processes so that the manufacturer can test their functionality and performance.

By the end of 2024, Rotarex will have identified the most effective treatment, the properties of which must surpass the current state of the art. The project also includes forward planning on the part of both partners for the mass production of the chosen solution. The total project budget is 1.7 million euros. This is funded by direct investment from Rotarex and financial support from the Ministry of the Economy and the Ministry of Higher Education and Research, through its direct grant to LIST.

"Innovation is a key point in strategy, both for Rotarex and at a national level."



Our strong in-house research and development skills, together with our collaboration with LIST in the surface treatment field, enable us to stay at the cutting edge of innovation in what are very demanding markets,” Jean-Claude Schmitz, President of Rotarex, is pleased to announce.

“Rotarex has a history of partnership with LIST, and we are delighted to continue to work with one of Luxembourg’s major successful companies. This project represents another specific example of the invaluable complementarity and trust between an industrial company and our national applied research institution. Together, we are working to develop tangible, local innovative solutions with international impact,” explains Damien Lenoble, Director of the Material Research and Technology Department at LIST.



About Rotarex

Rotarex is a global company designing and manufacturing premium gas control products and systems. Founded in Luxembourg 100 years ago, the company has grown to become one of the world’s leading producers of cylinder valves and pressure regulators. Thanks to its research, development and know-how acquired over the decades, Rotarex is now an important partner for many gas companies. Rotarex creates innovations through its Research and Development departments and its collaborations with university partners. Driven by this culture of innovation, Rotarex holds more than 75 active patents.

Currently Rotarex has around 2,000 employees, 32 sales offices and a presence in over 65 countries. Rotarex offers a responsive service to its customers around the world, and also offers a wide range of job opportunities.

About LIST

The Luxembourg Institute of Science and Technology (LIST) is a research and technology organisation (RTO) under the auspices of the Ministry of Higher Education and Research, and its mission is to develop competitive and market-oriented prototypes of products and services for public and private stakeholders.

With 680 employees, 75% of whom are researchers or innovators from all over the world, LIST is active in the fields of information technology, materials,



space resources and the environment, and works across the entire innovation chain, from basic and applied research to technology incubation and transfer.

By transforming scientific knowledge into intelligent technologies, data and tools, LIST:

- helps European citizens make informed choices
- helps public authorities make decisions
- encourages companies to develop
- For more information about the Luxembourg Institute of Science and Technology, please visit: <https://www.list.lu/>