

## **ARMOR GROUP and EQUIUM join forces for the energy transition**

**EQUIUM, a Nantes-based deep-tech firm, which has developed a cutting-edge heat pump that focuses on the use of acoustic waves, now welcomes ARMOR GROUP as a partner alongside other regional industrial players. As Hubert de Boisredon, ARMOR Group Chairman and CEO, wishes to steadily establish his Group's development in an ecosystem where "constructive, open industrial cooperation" reigns, he has led his Group to secure equity in EQUIUM, and will now be a member of the start-up's Board of Directors.**

### **EQUIUM and ARMOR GROUP become partners**

EQUIUM has brought together a pool of partners committed to reindustrializing the region and to forging high-impact industry, by drawing on their different industrial expertise. To this end, a few weeks ago, EQUIUM finalized a financing drive, where ARMOR GROUP acquired a minority stake alongside entrepreneurs such as Martin Fornage, Enphase Founder, and Pierre Tremolières, Accenta Founder, to further boost the renewed commitment of already-existing partners such as industrial supplier Ateq, the Family Office Entheos and PLP, the Pays de la Loire Region investment fund.

At the same time, ARMOR GROUP becomes a member of the Board of Directors of EQUIUM, an energy transition player that has invented the world's first silent, compressor-free heat pump, based on sound energy and 100% made in France.

*"EQUIUM is a real entrepreneurial adventure that I'm delighted to be embarking on with a partner like ARMOR GROUP. For us, this represents a unique opportunity to work with a major industrial group renowned for its values, its expertise and the excellence of its processes. ARMOR GROUP's experience will be an undeniable asset as we enter a new phase in our project, enabling us to industrialize our system at optimal cost and ensure our product quality."* states Cédric François, EQUIUM Founder.

Hubert de Boisredon, ARMOR Chairman and CEO confirms this and says: *"I'm extremely enthusiastic about the idea of ARMOR GROUP providing its full support to a promising company like EQUIUM, which is committed to the energy transition. We're basically in awe of EQUIUM management team's creative and entrepreneurial genius. We wish to be by their side to promote their groundbreaking high-tech invention. Our role is to offer advice and share best industrial practices, made possible thanks to our 100-year history."*

### **EQUIUM is revolutionizing the heat pump market**

EQUIUM is a deep-tech firm, based in Saint-Herblain (Loire-Atlantique, France), which has been developing an energy-efficiency and thermal-comfort solution since 2017 that focuses on the ability of acoustic waves to convey heat. This has led the teams to design and manufacture revolutionary heat pumps that are silent and reduce the CO<sub>2</sub> emitted by 90% compared to gas boilers.

This new generation of heat pumps, which combines ease of installation, the performance of a traditional heat pump and reduced maintenance, offers users eco-friendly, cost-effective thermal comfort and great ease of use. As such, by making the most of sound energy, EQUIUM produces heat and cold without refrigerant or flammable gases, makes use of recyclable materials and ensures the carbon footprint is reduced.

*"Through our firm commitment to developing a French acoustic heat pump industry, we intend to play a role in reindustrializing France, creating local, high value-added jobs and meeting the CO<sub>2</sub> emission reduction targets set by the IPCC for 2030; goals that we share with ARMOR GROUP"* states Cédric François, EQUIUM Founder.

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As 2024 dawned, EQUIUM kicked off an industrialization phase and is currently working on finalizing its product specifications with a view to obtaining all certifications required to place its products on the market, with a full-scale testing campaign scheduled for the end of the year. At the same time, the teams are finalizing the business model and defining distribution channels in anticipation of the marketing launch at the end of 2025.

## **ARMOR GROUP is changing**

After acquiring a stake in solar panel manufacturer HoloSolis a few months ago and recently announcing the finalization of its ARMOR SMART FILMS business activity, ARMOR GROUP reaches a milestone in its transformation and development.

*"I'm really proud of what we've accomplished with ARMOR GROUP's historic business activities, where each has now achieved great global success, particularly on the industrial coating and remanufacturing know-how stage. We will continue to support their development, yet we believe the time is ripe for ARMOR GROUP to move on in the energy transition and to open up to other forward-thinking industrial technologies that are useful to society, by working hand-in-hand with different partners. We will be able to provide them with our expertise and our industrial credibility to promote their development"* states Hubert de Boisredon. *"Today, ARMOR GROUP is establishing itself as a springboard for industrial energy. By initiating this open cooperation programme with HoloSolis and now with EQUIUM, the Group is illustrating just how far it intends to go in becoming a committed player in reindustrializing France and a spearhead in Europe for industry that has a positive social and environmental impact. We are determined to continue to forge partnerships of this kind with all those who share this conviction!"* he concludes.

### **About EQUIUM**

2017-created EQUIUM is a Nantes-based industrial deep-tech firm, which uses biomimicry to harness the thermal effect of acoustic waves to develop cutting-edge heat pumps that are the only one of their kind in the world and that incorporate this breakthrough technology to step up the widespread introduction of decarbonized thermal comfort in buildings, today and tomorrow.

This paradigm shift has led to the creation of a new generation of heat pumps, known as "harmonic compression" pumps (as opposed to mechanical compression technology using high-GWP refrigerants), that work with the Stirling cycle, the most efficient thermodynamic cycle, that are refrigerant-free, 100% French, and combine the ease of installation, use and maintenance of an electric radiator with the energy efficiency of a heat pump.

### **About ARMOR GROUP**

ARMOR GROUP is a responsible, committed player promoting social innovation. The community of women and men that make up this global industrial Group applies its know-how and expertise to manufacturing and creating innovative vital components. Formulation (inks, filaments, etc.), high-precision coating and cutting on thin film as well as the circular economy are examples of the types of expertise that the Group leverages to address social challenges. Since May 2022, the Group has been 100% owned by the management team and 378 employees-shareholders. The Group is global leader in designing and producing thermal transfer ribbons for printing variable traceability data on labels and flexible packaging (ARMOR-IIMAK). ARMOR GROUP, a front-line European player for innovative, sustainable consumables and inks as well as print services (Altin), is also a pioneer in developing and producing state-of-the-art materials like coated collectors for electric batteries (ARMOR BATTERY FILMS), components and filaments for additive manufacturing (KIMYA), smart films (ARMOR SMART FILMS) and organic solar film rolls. ARMOR GROUP is established worldwide and totals around 2,500 employees spread over some twenty countries across four continents. The Group recorded revenue of €447M in 2022. It invests €50M every year in industrial equipment and R&D. [www.armor-group.com](http://www.armor-group.com)