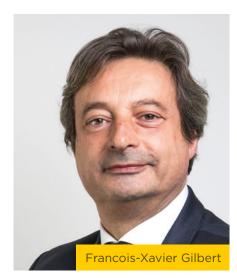
A CONVERSATION WITH FRANCOIS-XAVIER GILBERT CEO OF LINDAL GROUP



AEROSOL EUROPE: The last interview we had with LINDAL is now several years ago. Can you tell our readers what the current situation is for the aerosol industry, and in particular, for LINDAL?

Francois-Xavier Gilbert: Until the COVID-19 pandemic hit the world, the LINDAL Group was in line with its growth ambition to consolidate its world leading position for the supply of valves and actuators for the Aerosol Industry. Our industry was till that moment thriving and LINDAL Group alongside it. Over the last ten years, we have more than doubled in size and grown at a significantly faster rate than the overall market, both factors have propelled us into the leading position we enjoy today. We have leveraged this growth to develop and expand in our key market segments and geographical regions. We have achieved rapid growth in North America, Brazil, Mexico and Middle East and we are

now looking towards the Asian market. Inevitably, the COVID-19 pandemic has created many challenges to the whole industry, however the LINDAL Group has demonstrated a remarkable resilience to this crisis taking place in the world. We have been able to successfully manage our day-to-day operations and keep all sites operating, maintaining an uninterrupted supply of products to our customers.

AEROSOL EUROPE: Last year marked LINDAL's 60th anniversary – what have been the critical factors in your longevity and success?

Francois-Xavier Gilbert: Definitely our people. Their knowledge, skills and dedication to the business are a key factor in our success. To mark the anniversary, we expressly wanted the focus of our celebrations to be on our employees. We produced a special edition 60th anniversary album which included memories of people who work at LINDAL, past and present. The wave of stories and recollections we received brought home how important LINDAL has been in the lives of many, and this reminds us of how important they are to us.

As a family business, our 60th anniversary also revealed memories of the very individuals who instilled the importance of people at LIN-DAL; founder, Johannes and his son, Hans-Peter Lilienthal, were both acknowledged for the significant impact they made on their fellow business colleagues and the aerosol industry, and it's wonderful to see how their legacies live on today and carried over by their successor, Katharina Lilienthal

AEROSOL EUROPE: In 2018, LINDAL expanded its activities in North America. How has the facility been progressing?

Francois-Xavier Gilbert: 18 months on, and the vision we had for our 100,000 square foot Columbus facility is being realised. We are onboarding new customers, taking on new projects, and thanks to the wealth of new capabilities we offer, we have the scope to take on more. Built as a result of out-growing our original site in North America, this new \$20m facility, has not only fulfilled its original need but it represents a key part of our growth strategy and signifies our commitment to the North American Market.

AEROSOL EUROPE: Where do you see further growth potential for LINDAL?

Francois-Xavier Gilbert: Definitively in North America, but also in the LATAM region, which still has a significant potential for growth, as well as in Middle East and Asia. Our growth in LATAM is being underwritten by a new \$25m investment in a state-of-the-art facility in Jundai, São Paulo State, Brazil. The ground was officially broken in February of this year. The new complex will be approximately 12,500 sqm for the 1st phase. Completion of the project is expected by the end of this year with around 130 employees at the site. This project reflects the growth potential in the Brazilian aerosol market and our commitment to it and to our trusted customers we have been supporting

for several decades, building with them the local market.

The Middle East also signifies strong potential, and the investment in our Turkey facility in 2014 has given us an increased share in a very dynamic and propitious aerosol market - it is also an excellent gateway for further growth by augmenting our strategy for the Middle East.

China and Asian territories are other regions where we plan for future growth and expansion. We are building a local organisation based in Shanghai, which is already delivering new business opportunities and constitutes the basis for the establishment of our footprint in China. Whilst our strong footprint in Europe and the America region continues to be the bedrock of our overall stability and a place where we maintain above-industry growth, we are not resting by just relying on our existing footprint.

LINDAL's growth is not simply about geographical expansion, it also hinges on the development of key innovations and new products, improving the end consumers satisfaction and by opening doors to new aerosol dispensing applications. One example is the array of technical solutions and valve and actuator combinations we are offering to our customers for the conversion of their packs from propellant to compressed air, the possibility to use PCR resin on their actuators, recyclable solutions and so on and so forth. Our Bag-and-Bag technology for instance, which recently won the FEA Packaging Element Design award, has two distinct product chambers inside the same can. This offers all the benefits of a traditional Bag-on-Valve (BOV) but now makes it possible to package and dispense two distinct formulations in the same pack, rendering it suitable for new applications for aerosol packs such as hair dyes and other products where the product needs to be "activated" by a second agent at the time of use. Similarly, our BOC (Bag-on-Collar) technology, offers the possibility to fill and dispense high viscosity products that previously were difficult or even impossible to dispense via conventional aerosol packs.

Furthermore, combined with our





broadening capabilities, our proficiency in innovation means we can respond effectively to specific custom projects and strengthen our expertise in our chosen market segments.

AEROSOL EUROPE: In 2013, you told us about your Global Innovation Centre. How has the centre developed since then?

Francois-Xavier Gilbert: Over the last eight years, our Global Innovation Centre in Briey, France, has become the hub we set out to establish. It's a place where new ideas are formed and where concepts meet technology to produce the breakthrough products that precede our reputation and provide our customers with the innovations they are looking for. The centre has proved an invaluable asset for the collaborative projects we regularly undertake. Similarly, our tooling and equipment

division, Leonhard Fischer, has also been developing unique manufacturing solutions, thanks to a series of ground-breaking projects with our partners.

With its vast experience in mould tool design and manufacturing, our experts are involved in projects at every stage of product development, including design for manufacture at the very start, to guarantee maximum productivity and efficiency. To ensure all tool specifications are met, our team designs and develops tools both internally and with external toolmakers where applicable. Customised assembly lines and fully bespoke machines for intricate products have become the hallmark of our engineering team.

AEROSOL EUROPE: What are the innovations that have helped LINDAL 'revolutionise' the aerosol market?

Francois-Xavier Gilbert: We have worked on some fascinating and insightful solutions, involving both valves and actuators, there are too many projects to mention all of them! One of our most recent and exciting developments is our sustainable Mini Engine platform that utilises new actuator designs made from post-consumer resin and shortens product development time to market. The new

patent-pending technology works by separating a one-piece actuator into two elements: an outer body made from 100% PCR and an internal 'Mini Engine' which produces optimum spray performance. The outer body also enables weight reduction compared to standard actuators and the short spray channel is specifically designed for use with compressed gas. Sustainability is a crucial factor for all our customers and partners, and we have worked hard to develop a platform with significant environmental advantages, as well as economical and ergonomic improvements.

A further innovative solution is our award-winning Enhanced Mist Technology product, that produces a very fine mist spray using compressed gas, and which won the British Aerosol Manufacturing Association's Aerosol Packaging Award in 2018. Not only did it shine in the awards for the merits of its design, but this product has huge growth potential, buoyed by the

increased pressure allowance for compressed air applications, as stipulated in the recently updated FEA guidelines. We've been making great strides in the technical DIY market too. This is shown in our collaboration with chemical leaders,

DuPont's Performance Building Solutions. We worked with their team to produce the GREAT STUFF[™] SMART DISPENSER[™], the world's first polyurethane foam dispenser with automatic tip seal that reduces product cure in the can after initial use, enabling the can to be stored and used for up to an additional 30 days after first use.

Designed to reduce waste, messiness, blockages and improve consumer control and affordability, our expertise was called upon to make the dispenser fully manufacturable, which is where our technical experts at Fischer stepped



in with their knowledge. The product also proved a winner at last year's ADF Innovation Awards in New York.

AEROSOL EUROPE: Where do you see innovation potential in the industry?

Francois-Xavier Gilbert: Innovation potential for aerosol solutions can be realised by addressing the sustainability agenda within the industry and responding to specific

> sustainability issues relevant to our customers and partners.

> > The true drivers for sustainability innovation can be found in many of our solutions, which include aerosol valves specifically

> > > designed for

compressed

Mini Engine Platform

gas propellants, recyclable containers (PET/Aluminium

etc) and the use of post-consumer materials. Fulfilling the wide scope of opportunities within compressed air solutions are integral to Lindal's innovation agenda.

Without doubt, the development of the sustainability agenda will continue at pace, making way for further disruptive technologies and smarter integrations of existing solutions. We expect the use of recyclable materials, such as post-consumer resin (PCR) to become the norm as part of a broader range of aerosol solutions and innovations. We will continue researching new ways to introduce sustainability into our products, addressing both performance and affordability for our customers. PCR represents strong potential to satisfy both of these needs but we see this only as the beginning. Our focus on sustainability is not simply reflected in our products, but also through our manufacturing operations, where we continually look at low energy-consuming processes, whether that's through reducing assembly lines through smarter automation or by the wider adoption of recyclable materials and greater use of renewables.

AEROSOL EUROPE: Finally, how do you assess the development of the aerosol industry in the medium term?

Francois-Xavier Gilbert: The aerosol industry remains a dynamic market, full of potential and opportunities, even though the COVID-19 pandemic is creating uncertainty in the short term. We must continue to track, observe and respond swiftly to consumer trends to keep ahead. The end consumers are more and more demanding and it is our duty to develop solutions in aerosols which can offer a better experience. The growing surge of environmental interest on a global level is an important factor which is influencing the consumers and it is considered in everything we do at LINDAL, from our innovation centre, and tooling and equipment division, to the materials we choose for our products.

AEROSOL EUROPE: Dear Mr. Gilbert, we thank you for this conversation.