

Elematic and Carbonaide launch world's first CO₂-cured precast concrete solution through commercial partnership

This innovative CO₂-curing solution offers a scalable way to improve the cost, speed, and quality of precast concrete production while improving sustainability by permanently storing carbon in the end products.

[Elematic](#), a globally recognized manufacturer of precast concrete production systems, and [Carbonaide](#), a leader in carbon dioxide utilization and storage solutions for the building industry, have announced commercial cooperation to become the first to bring production scale CO₂ curing systems for precast concrete and infrastructure product production around the world.

The collaboration between Elematic and Carbonaide provides a solution to harness CO₂ in the curing process, improving the material mix and production speed of precast concrete elements. Implemented initially into Elematic's wall lines and circulation lines, this innovative approach makes precast concrete not only more efficient but also low carbon, offering a solution for large-scale infrastructure projects that don't compromise on speed, quality, or cost.

Concrete production accounts for approximately 8% of global CO₂ emissions. With Carbonaide's technology, the built environment can become part of the solution as it binds carbon into the building materials and elements. Additionally, the cost of cement has doubled in the past 5-7 years, with no sign that it will return to lower rates.

Precast concrete as a carbon sink

Carbonaide's award-winning technology binds carbon dioxide into precast concrete using an automated system at normal air pressure. The technology has been used commercially in Finland since early 2024, and it has been shown to halve the CO₂ emissions of traditional Portland cement concrete by reducing the required cement content up to 20 percent, while reducing curing time up to 25 percent, and mineralizing CO₂ into concrete.

When industrial side streams, such as industry slags or low-carbon binders, are used in the binding process to substitute part of the cement, the result is concrete with a negative carbon footprint. With Carbonaide's technology, a precast plant may become a carbon sink.

*"We are thrilled to partner with Carbonaide in offering this innovative solution to our customers," says **Teppo Voutilainen**, CEO of Elematic. "Carbonaide's CO₂-curing technology aligns perfectly with our commitment to delivering fast, sustainable, cost-effective solutions for the precast concrete industry. By integrating Carbonaide's solutions into our systems, we can offer a practical solution that is both commercially viable and environmentally responsible."*

*"Our collaboration with Elematic is a significant step toward realizing the potential of CO₂ as a resource in the construction industry. By incorporating our CO₂-curing technology into Elematic's advanced production systems, we empower precast concrete manufacturers to produce cheaper, faster, stronger, and greener products. Together, we can drive innovation and create a lasting impact on the industry," says **Tapio Vehmas**, CEO of Carbonaide.*

Entering new markets with commercial partnership

Elematic's 65 years of expertise in precast technology and its expansive customer base across 100+ countries provide a solid foundation for scaling CO₂-curing solutions worldwide. This extensive reach ensures that the CO₂-curing systems will be accessible to a broad audience, expanding the solution's impact.

"The market demand for more environmentally friendly building solutions is huge. Elematic's solutions are widely used in large-scale urban development projects where industrialized, precast construction is becoming a priority. With this collaboration, we are enabling faster market adaptation of the technology to meet the rising demand from our clients and extend our market reach to cover the whole precast concrete industry with a turnkey solution," continues Vehmas.

The companies have also agreed on regional exclusivity arrangements to secure the benefits of the partnership in selected markets.

[Media kit with pictures](#)

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About Carbonaide Oy

Carbonaide Oy is a Finnish company pioneering sustainable CO₂ utilization and storage technologies for the construction industry. The company's innovative solutions help manufacturers reduce their carbon footprint by utilizing CO₂ to enhance the strength and durability of concrete products. Carbonaide's CO₂ curing technology provides a sustainable method for capturing and storing carbon dioxide in concrete elements, creating a circular carbon economy and contributing to climate change mitigation efforts. For more information, visit <https://carbonaide.com>.



About Elematic Oyj

Elematic Oyj is a global leader in precast concrete technology. With over 65 years of experience, the company designs, manufactures, and supplies high-quality machinery, equipment, automation solutions, software, and services for the precast concrete industry. Elematic's systems cover the entire precast concrete production process, from design and manufacturing to delivery and installation, helping customers increase productivity, sustainability, and profitability.

For more information, visit <https://www.elematic.com>.