

PRESS RELEASE

The world's leading cement manufacturers choose Turboden technology for power generation.

With the latest installation at Riyadh Cement, Turboden has now exceeded 115 MWe installed in the cement industry.

Brescia, Italy – October 12, 2026 – Turboden, a Mitsubishi Heavy Industries (MHI) Group company and global leader in Organic Rankine Cycle (ORC) technology, announces the successful start-up of a 13 MW ORC Waste Heat to Power (WHP) plant at **Riyadh Cement Company, which represents the largest one installed in a cement factory in the world.**

With 21 ORC power plants installed worldwide (115+ MWe), covering almost the totality of the high temperature ORC installations in cement sector, Turboden further strengthens its leadership in medium- to high-temperature waste heat recovery solutions. This latest installation is the largest ORC system ever commissioned in a cement plant globally and **the first ORC plant in the Kingdom of Saudi Arabia (KSA).**

"The successful commissioning of this project at Riyadh Cement marks an important milestone not only for Turboden, but for the entire cement industry. What makes this project particularly significant is its ability to generate substantial amounts of clean electricity without consuming water, a key advantage in regions facing increasing pressure on natural resources. We are proud to support Riyadh Cement in its sustainability journey and to contribute to Saudi Arabia's industrial energy transition with a solution that delivers both environmental and economic value." **Paolo Bertuzzi, Managing Director and CEO Turboden S.p.A.**

A Technology Trusted by Global Cement Leaders

Turboden's extensive cement sector portfolio includes references with top international companies such as: **Holcim Group, CRH Group, Heidelberg Materials, Cimpor (Taiwan Cement Corporation), Çimsa (Sabancı Holding) and Colacem.**

These successful projects, often through EPC partners and energy service providers, demonstrate the trust global cement leaders place in Turboden's proven technology and expertise. This trust continues also during the life of the project considering that almost all the customers maintain LTSA contract with Turboden for all the life of the plant.

A Water-Free Solution for a Sustainable Future

Founded in 1997, **Riyadh Cement Company** is one of the most prominent cement producers in Saudi Arabia, recognized for its production of grey and white cement and for its strong commitment to sustainability and operational excellence.

The company's objective was clear: **reduce its CO₂ footprint without increasing on-site water consumption**, while recovering valuable heat otherwise dissipated into the environment.

Turboden addressed this challenge by delivering a **13 MW ORC unit equipped with an Air-Cooled Condenser (ACC)** and using **cyclopentane** as working fluid. The system is connected to **six Waste Heat to Power (WHP) units** installed on **two cement kiln lines**.

A single thermal oil loop collects and transfers the heat to the **ORC unit, which converts unused thermal energy into clean electricity without consuming water, and making it perfectly suited for arid climates**.

Designed for Extreme Conditions

As Turboden's first project in Saudi Arabia, the plant was engineered to comply with new local regulations and to operate reliably under extreme ambient temperatures typical of desert environments.

The successful commissioning confirms the robustness, flexibility, and industrial maturity of ORC technology in large-scale, energy-intensive applications.

Tangible Environmental and Economic Impact

The WHP plant can potentially generate **nearly 80 GWh of electricity per year**, covering a significant share of the facility's internal power demand.

This results in:

- Direct contribution to Saudi Vision 2030 decarbonization objectives
- An estimated **~37,000 tons of CO₂ emissions avoided annually**, equivalent to removing approximately **8,000+ cars** from the road each year
- Reduced exposure to energy price volatility through on-site power generation

By transforming waste heat into clean power, the system delivers immediate Scope 1 emission reductions while enhancing plant efficiency and competitiveness.

A Milestone for the Cement Industry

The global cement industry faces the dual challenge of meeting growing demand while drastically lowering CO₂ emissions. Despite widespread Net Zero commitments, cement production remains carbon intensive. Immediate, scalable efficiency improvements are essential.

Waste Heat to Power based on ORC technology is one of the most effective levers available today, enabling cement plants to convert untapped thermal energy into clean electricity, often covering up to 30% of their power needs.

With this landmark project, Turboden not only consolidates its **global leadership in the cement sector** but also demonstrates to the Middle East market that ORC technology is a reliable, bankable, and water-free solution capable of delivering large-scale decarbonization in real industrial conditions.

Several other major Saudi cement producers are also carefully considering the possibility of following RCC's strong and inspiring example, and Turboden stands ready to support them with detailed feasibility studies.

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About Turboden

Since 1980, Turboden S.p.A. has been a pioneer in the energy transition, providing technological solutions for industries and utilities in power generation and gradually expanding to include heat electrification solutions. Part of **Mitsubishi Heavy Industries Group**, Turboden combines strong technical expertise in carbon mitigation with flexibility across the entire project lifecycle, delivering optimized solutions to decarbonize industrial processes. A world leader in sustainable power production, the company has installed more than 470 Organic Rankine Cycle (ORC) plants in over 50 countries, with more than 1 GWe of overall capacity. Turboden counts 450+ employees and recorded €152 million in sales in FY2025. Its technologies have enabled over 63 million tons of CO₂ savings. The largest plant in operation reaches 29 MWe, while a 300 MWe project is currently under construction, confirming Turboden as a key global partner for energy efficiency and sustainability.