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AJ Baker, Epta driving CO₂ innovations in warm Australia

Counting on a successful history of cooperation, AJ Baker and EPTA are looking for further expansion of CO₂ in Australia with Epta's new Full Transcritical Efficiency designed for warm climates.



Epta launched the FTE concept at EuroShop 2017

Amid plans to phase down HFCs in Australia, AJ Baker & Sons and Italy's Epta Group are together increasing the installation of natural refrigerant-based systems in the sunny country, with over 300 cascade CO₂ installations, six CO₂ liquid recirculation plants, and most recently, 10 transcritical CO₂ installations up and running. Next will be the official launch of Epta's latest innovation designed for warm climates, the Full Transcritical Efficiency (FTE) concept.

Steve Laing, national commercial manager at Epta Australia, and Mike Baker, managing director of Australia-based AJ Baker & Sons, told *Accelerate Australia & NZ* how their history of close collaboration has led to world-class innovation and how their results are having an effect on the entire natural refrigerant industry.

None of this was built overnight. The foundations of their success, says Laing, are a combination of time and communications. "The relationship between Epta and AJ Baker has evolved over the course of 20+ years of close collaboration," Baker said.

"The success is built around transparency, with a strong communication channel – particularly with CO₂ technology, which is constantly evolving. We have to rapidly leverage from one another's experience," Epta's Laing explained.

Baker says that AJ Baker & Sons – which is based in Perth and has branches in Brisbane, Sydney, Melbourne, Adelaide and Bunbury – is able to leverage the know-how Epta brings from Europe to provide their customers with the best possible solutions and to give their business a competitive advantage.

Climate: Presenting challenges and opportunities

The Australian climate presents many challenges, but also many opportunities. Baker reveals how AJ Baker addressed these obstacles via several different methods.

"Our ten transcritical CO₂ installations, which we've been able to in most of the [main] cities in Australia, have allowed us to look at different climatic conditions, different store sizes and different measures of gas cooler outlet temperature control, which is one of the most important things with transcritical CO₂ in high ambient temperatures," Baker said.

Laing reveals that the varied climate in Australia has proved to be a great test basin for adapting CO₂ technology to different conditions.

"System designs across the country have varying configurations to adapt to local conditions. We have sites with high-pressure sub-coolers, adiabatic assistance, and pre-coolers," he said.

Baker adds: "We are also installing parallel compression systems with 60 bar liquid as part of our ongoing system engineering."

"We need to cater for ambient conditions from 0°C to 47°C air on to gas coolers so we are always testing new technologies that have the potential to add to the overall system performance," he said.

This culture of constant testing and innovation led to one of Epta's most recent innovation – the Full Transcritical Efficiency (FTE) concept – which debuted at EuroShop 2017.

The company currently has 13 systems operating to this blueprint in Europe and Australia, yet much of the testing was done in Australia.



With Australia having higher ambient [temperature] conditions, this created an opportunity to conduct a field trial with AJ Baker to test Epta's new FTE (Full Transcritical Efficiency)."

– Steve Laing, Epta Australia

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"With Australia having the higher ambient conditions, this created an opportunity to conduct a field trial with AJ Baker to test Epta's new FTE – commissioned north of Perth in October 2016 – which was released at EuroShop," said Laing.

"We're lucky enough to be one of the pioneers in Australia with the guys in Europe. We had one on trial since September last year," said Baker.

"With the newly launched FTE system and the trials conducted over the previous 18 months, we are now able to prove to retailers that we can maintain efficiency in high ambients with transcritical CO₂ in a simplified format," added Laing.

"Epta & AJ Baker will continue to drive the technology in collaboration, further strengthening their partnership and ultimately supporting the retailer's investments," he said.

For the full story, read '[AJ Baker, Epta driving world-class innovation](#)' in the latest issue of [Accelerate Australia & NZmagazine](#).



By Devin Yoshimoto

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