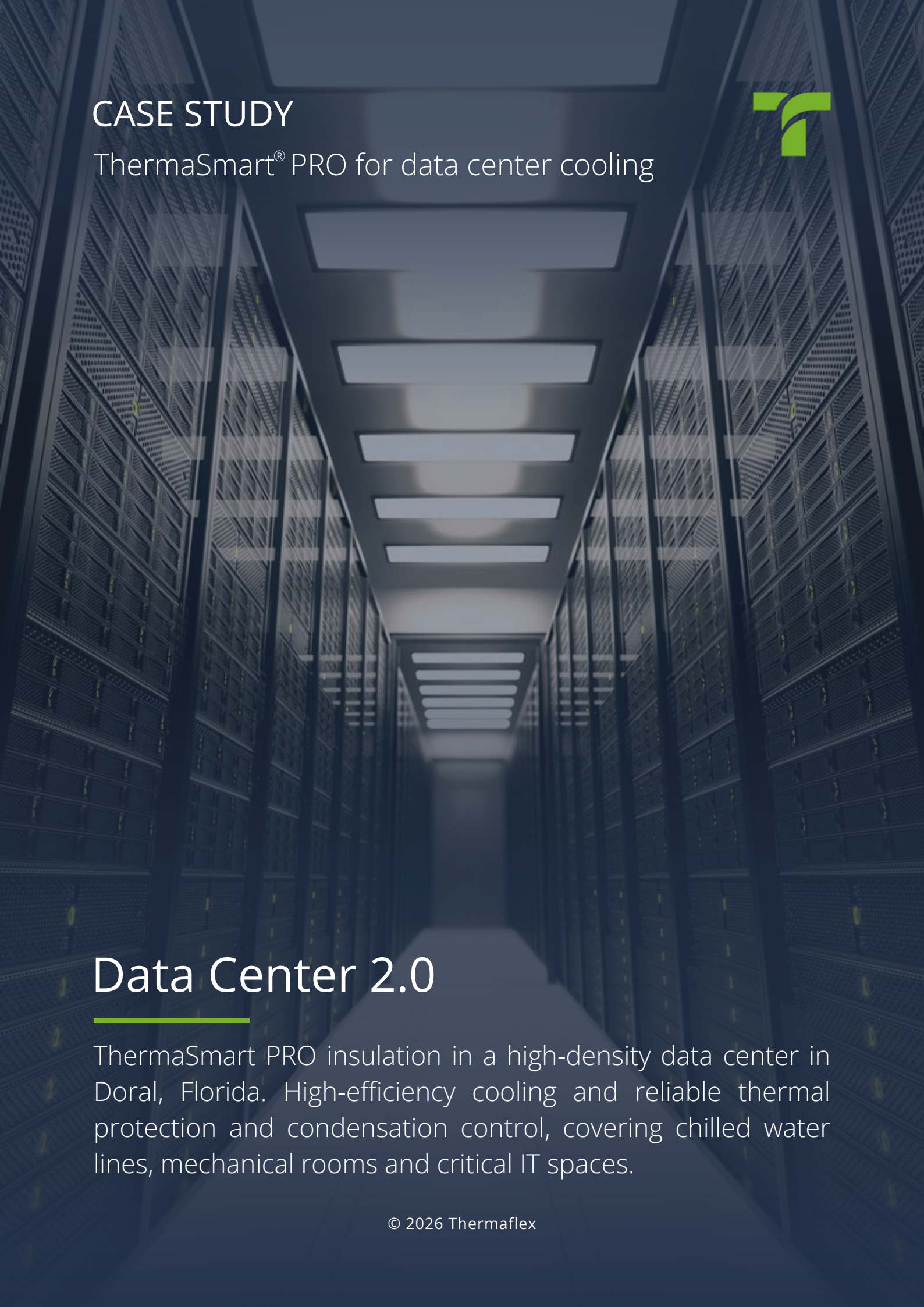

CASE STUDY

ThermaSmart® PRO for data center cooling

Data Center 2.0

ThermaSmart PRO insulation in a high-density data center in Doral, Florida. High-efficiency cooling and reliable thermal protection and condensation control, covering chilled water lines, mechanical rooms and critical IT spaces.

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Securing climate-proof, and future-proof data

Considering their average power density is equivalent to about 9 shopping centers, a suitable energy infrastructure is key. Contracted by the Osorno group, this data center was no exception, especially considering the unforgiving climate of the Sunshine State. Set out to serve as a leading example in regard to efficiency, reliability and condensation-free data storage, a partnership with Thermaflex for Data Center 2.0 followed.

Project Goal

Having wide experience in the installation of insulation systems, a partnership with contractor 'Osorno Group' was to result in a suitable solution ensuring a sustainable performance of the distribution systems. The cooling system, consisting of 4 chillers processing 1,600 tons of refrigeration, was to be renovated – including all elbows, tees, valves, and pumps – to secure an efficient, reliable and future-proof energy infrastructure.

Due to the unique challenges of the Floridian climate, water and sun resistance as well as a hurricane-proof mechanical strength was of primary importance when reviving the thermal protection of the chiller systems.

Project Process

Securing the critical storage and handling for a wide variety of users 24/7, in heat-blazing server rooms requires a sound and stable level of cooling to ensure safe operation. Combining those challenges with the tropical climate of the Sunshine State requires an efficient and sustainable cooling system in order to warrant a headache-free operation, while keeping costs at a minimum.

On top of that, the chillers in the Doral data center are located outside the building under both extreme sun, as well as extensive rain – inherent to Florida's climate. Lifeguarding the performance of the cooling system required a state-of-the-art thermal insulation system. Condensation, a common enemy when it comes to cooling leading to water accumulation, poses a significant risk on such installations, let alone the consequent corrosion, water and energy losses.

A pilot test was carried out in order to verify that the proposed solution based on ThermaSmart PRO insulation responds to challenges such as resistance, condensation prevention, and stable insulation performance. Ideally, the base maintenance group should be able to intervene in the systems immediately if necessary.

Project Results

Securing the critical storage and handling for a wide variety of users 24/7, in heat-blazing server rooms requires a sound and stable level of cooling to ensure safe operation. Combining those challenges with the tropical climate of the Sunshine State requires an efficient and sustainable cooling system in order to warrant a headache-free operation, while keeping costs at a minimum.

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Project partner's quote

"We really appreciated the installation of ThermaSmart PRO due to its extraordinary properties. In a one-on-one, ThermaSmart PRO is proving the superiority as a durable solution in a retrofit project developed in this Data Center."

Guillermo Araujo
Business Development Director GPipes

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