

7-Eleven Thailand upgrades to high efficiency, compact refrigerated showcase solution

Summary

7-Eleven Thailand chooses Emerson to achieve its goals of improved energy efficiency and flexibility for installation of additional showcases.

Customer

CP ALL Public Company Limited, formerly known as CP Seven Eleven Public Company Limited, is the flagship company of the Charoen Pokphand Group's marketing and distribution business that operates 5,790 convenience stores under the 7-Eleven trademark in Thailand.

Application

Refrigeration systems for showcases and walk-in cooler.

Challenge

7-Eleven Thailand has been using individual reciprocating condensing units for each of the store's showcases. Although power consumption was acceptable, this setup used up a lot of space and made it difficult to install additional showcases for expansion.



Prior to upgrading its refrigeration equipment, 7-Eleven Thailand established the following objectives:

- Improved energy efficiency compared to the old system
- More precise showcase temperature control (within +/- 1°C)
- Reduction of condensing units, maintenance costs and space occupied
- Reduction of energy costs through variable capacity (capacity modulation)
- Convenient installation and service
- Return on investment within 1.5 years

Solution

For several months, Emerson worked closely with 7-Eleven stores in Thailand to find ways to improve their refrigeration systems. After spending the first month gathering data to fully understand what customers need, the ZXD condensing unit model was recommended to replace three existing units that support showcases.

The succeeding six months of testing through everyday use yielded positive results that highlighted the benefits of using the ZXD condensing unit. The first direct benefit is better space management as a single outdoor ZXD condensing unit occupies a smaller area compared to the three reciprocating condensing units it replaced. This also allowed the addition of more showcases inside the store since there is now more space for additional outdoor condensing units.

The second benefit is a more precise box temperature because the unit can change its capacity on demand - a unique capability of ZXD condensing units to shift from 10-100% capacity modulation. This also means less power consumption when operated at lower capacities.

Finally, the installation of one ZXD condensing unit to replace three others underscored a significant reduction in cost, ultimately paving the way for a shorter payback period.



Emerson ZX Platform condensing unit

Results

- 13% reduction on power consumption
- \$718 USD potential annual energy savings per store
- 27% freed-up floor space and better store aesthetics
- 1.5 years maximum payback period

Resources

Scan the QR code to learn more about the Emerson ZX Platform Condensing Unit



Features	Owner/Enterprise benefits
Sound improvement	<ul style="list-style-type: none"> • Lower operating costs
Energy improvement	<ul style="list-style-type: none"> • Creating a more comfortable environment for guests • Beneficial for regions with noise ordinances
Diagnostic protection capabilities	<ul style="list-style-type: none"> • Reduce cost of nuisance calls • Extends life of your equipment • Reduces potential service costs • Maintains your equipment to original standards, maintaining energy efficiency and temperature control • Have confidence in what your contractor is fixing
Slim profile, lighter weight, and optional wall mount capability	<ul style="list-style-type: none"> • Lower installation costs • Improved appearance of your enterprise site • Avoids more costly solutions for potential location issues

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