

Shaping Refrigeration Systems for Tomorrow

Customer's Point of View

Delivering fresh and safe halal food is important. In line with this, NewTon, a refrigeration system that uses natural refrigerant was introduced.

This system is environmentally friendly, complies with CFC phase-out measures, and helps reduce electricity consumption by approximately 40%*.

*Comparison at the Karawang Food Processing Plant

Two NewTon R-6000 units are used at the newly-built cool storage facilities in Bekasi, Indonesia, a suburb of Jakarta, and an IQF Freezer and NewTon R-3000 are used at the Karawang Food Processing Plant

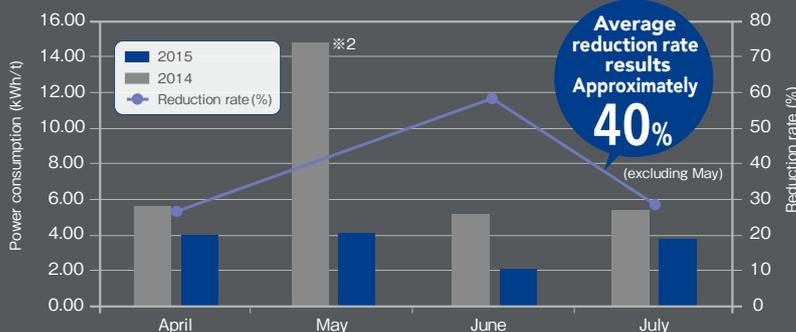
Deciding Factor

The system was evaluated for its energy efficiency and safety, as well as its operating system and CFC phase-out compatibility.

Advantages

- Power consumption is reduced by approximately 40%
- Safety is maintained through indirect cooling methods and hazard neutralizing equipment
- Reliable safety results in business from new customers
- Complies with the abolition of CFCs by 2030 (in Indonesia)
- Completely automated operation enables safer operation and a management control system with less need for manpower

Comparison of electricity consumption before and after installation of NewTon at the Karawang Food Processing Plant



1. The energy in this table shows values for the entire cold-storage facility, including office equipment, lighting, and conveyance equipment.
2. Because the production volume for May 2014 was significantly different than other months, it has been excluded.



NewTon

adibfood
BEST HALAL FOOD SERVICE

PT. ADIB GLOBAL FOOD SUPPLIES

In Indonesia PT. Adib Global Food Supplies is involved in food processing and logistics services as well as cold storage rental services. One of Adib's greatest features is their commitment to providing fresh, safe, reliable halal food to the people of Indonesia through their business vision of the "Best Halal Food Service". They currently have eight distribution centers which provide fresh, high-quality foods mainly to supermarkets in Indonesia. In their mission to improve the lives of Indonesian citizens and contribute to the development of society, they aggressively pursue business challenges and are building a safe and advanced cold supply chain.

Company Profile

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**Background for adopting NewTon:
To deliver fresh and safe halal foods**

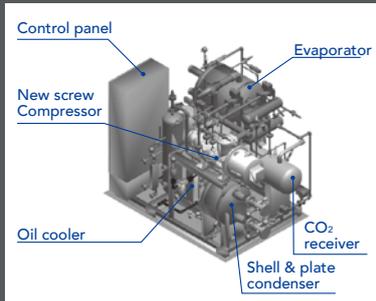
With a population of nearly 240 million, Indonesia faces a severe shortage of fresh meat, fish, and vegetables. As such, there is an urgent need to establish and expand a cold supply chain for a stable food supply. President Budi Mulyono says, "Our vision of the 'Best Halal Food Service' comes from our desire to provide fresh foods to improve our customers' health so they can work well, making both themselves and the country richer." To achieve this vision, Adib considered freezer and refrigeration equipment required in distribution centers and factories.



PT. ADIB GLOBAL FOOD SUPPLIES
President Director
Mr. Budi Mulyono

**Deciding factor for adopting NewTon:
Economical and environmentally friendly**

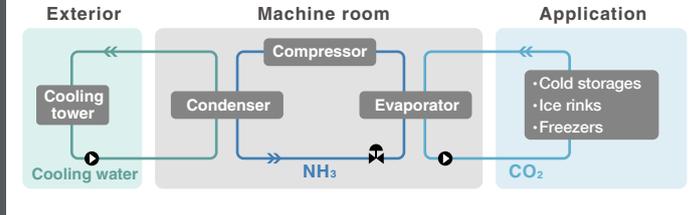
President Mulyono relates, "In the beginning we considered a liquid ammonia pump cooling system used in many businesses in Indonesia. Mayekawa Indonesia proposed the NewTon system, whose safety and energy efficiency we found very interesting. With this in mind we visited Mayekawa's Moriya Factory and businesses in Japan that have adopted the NewTon system to see what customers thought of the product. This visit convinced us that the NewTon system has the energy efficiency that Indonesia needs, is compatible with CFC phase-out, and fulfills the most important aspect of continuing business, namely that it is economical."



*At the Mayekawa Moriya Factory

**NewTon evaluation:
High level of safety and energy efficiency**

Indirect cooling method utilizing carbon dioxide(CO₂) characteristics



In simulations before adoption of NewTon at the Bekasi cold storage facilities, a comparison with facilities of the same size showed approximate 30% energy efficiency (reduced power consumption).

Regarding safety, one of NewTon's features is its low ammonia charge of only 50 kg*,

and its indirect cooling method which makes it necessary to only circulate ammonia in the machine room. The system has received high praise for its consideration of double and triple safety measures that ensure hazard removal equipment maintains safety even in the event of a leak. Adib was also interested in the stainless steel piping. The possibility of long-term usage was also deemed a significant advantage.



*On the NewTon R 6000

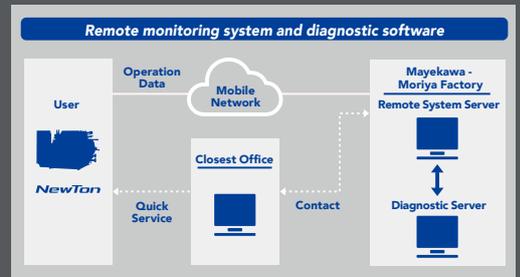
**Results after adopting NewTon:
Power consumption per pallet has been reduced
approximately 25 to 30%**

When comparing post-adoption numbers with those of similarly-sized facilities, power consumption per pallet has been reduced approximately 25 to 30%.

Additionally, because the status of the system can be viewed using various data through a remote monitoring system, there is no need to employ specialist technicians, thereby saving on manpower.

President Budi mentions, "Because ammonia is not directly used as a coolant in cool storage where customer goods are kept, heat-exchanged CO₂ is pumped into the warehouse, providing peace of mind and satisfaction for customers who use this service." Ever since NewTon was introduced we have received increased requests from customers. We're very satisfied."

Although Adib currently possesses eight distribution centers, they are planning to build 6 more to achieve their vision of the Best Halal Food Service. Because cooling systems are necessary to build a rich country, President Budi Mulyono tells us that they would like to continue working with Mayekawa in the future.



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