

Shaping Refrigeration Systems for Tomorrow

Customer's Point of View

A renovation including NewTon installation results in an approximate 40% reduction in yearly power consumption and stable production of high-quality frozen bread dough

In order to give priority to improved quality, in August 2012, a NewTon F refrigeration unit that uses natural refrigerant was installed along with an updated spiral freezer, resulting in greater energy efficiency and improved productivity.

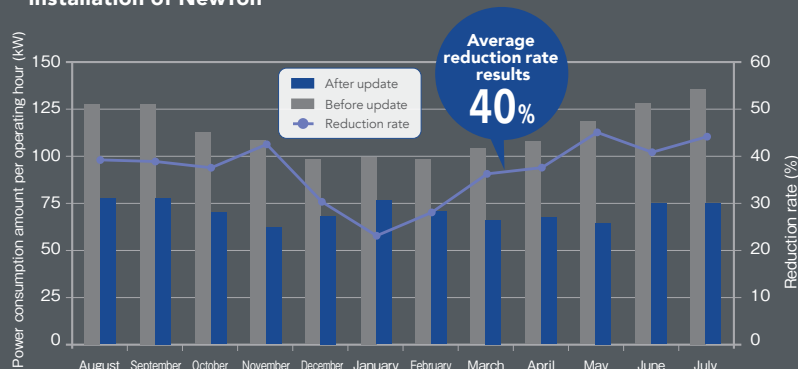
Deciding Factor

The new unit was evaluated and compared with the previous model for energy efficiency, cooling speed, and continuous operating time.

Advantages

- Approximate 40% reduction in power consumption
- Reduced environmental impact (full phase-out of CFCs)
- Improved cooling performance results in stable production of high-quality frozen products
- Maintenance labor reduced through fully-automated operation
- Reduced impact on surroundings due to quiet operation

■ Comparison of refrigeration system power consumption before and after installation of NewTon



NewTon

Kobeya Baking Co., Ltd. Chiba Branch

Kobeya Baking Co., Ltd. (established 1918) is a pioneer that was the first in Japan to succeed in baking bread using yeast cells. They produce and sell bread, cake, frozen dough, and operate bakeries and restaurants.

They operate on the concept of "Fresh & Pure" and "Healthy is Tasty", with no additives in their yeast foods and emulsifiers. Based on the business mission of "Pioneering the Future of Food Culture", the Chiba branch focuses on frozen foods, producing and supplying high-quality frozen bread dough for delivery across Japan.

Company Profile

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T E L ▶ +81-475-73-2170

U R L ▶ <http://www.kobeya.co.jp>



Renovation back story

Rising temperature countermeasures and full phase-out of CFC

The Chiba branch is located in the central part of the Boso Peninsula (operations began in 1996). The branch realized renovations were needed when warming trends began in 2005.

"Rising outside temperatures in summertime affects the production of frozen bread dough, and it became difficult to ensure the proper temperatures in the facilities compared with the past. Also, because we had decided to completely phase-out CFC by 2020, we decided to systematically update the facilities as soon as possible."

(Nakajima, manager)



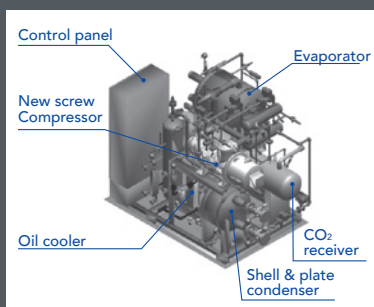
Kobeya Baking Co., Ltd.
Manger, Frozen Production Dept., Fresh
Headquarters
Mr. Yuji Nakajima

Selection Factor

Excellent freezing performance and natural refrigerant system

"The NewTon system was selected for its high heat efficiency, excellent freezing performance, and its natural ammonia / CO₂ refrigerant that fits our corporate philosophy."

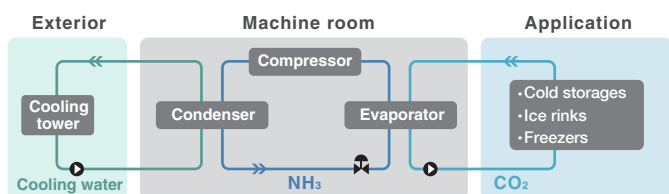
(Nakajima, manager)
In particular, the NewTon system's cooling speed and fine-tuned temperature control is ideal for accurate temperature control required in the process of producing bread dough that has been proofed and then frozen.



The NewTon system's superiority

High level of safety and quiet operation

Indirect cooling method utilizing carbon dioxide(CO₂) characteristics



To maintain safety, a small charge of Ammonia is confined to the refrigeration cabinet, reducing the risks of leaking out of the equipment. Even if it does leak out, it can be processed in a removal apparatus.

"Renovations can be difficult to carry out without interrupting production, and the advantages of NewTon's Factory Packaged System made the transition smooth. We are thankful that they were very careful not to allow any contamination, and that the construction was quick."

(Mr. Masauchi)

The highly quiet operation of the NewTon system is apparent, solving problems of noise affecting residents in the area.

"Machine vibration is minimal, and it is so quiet that you can't tell if it's operating unless you open the door to the machine case."

(Mr. Masauchi)



Kobeya Baking Co., Ltd.
Frozen Production Dept.,
Fresh Headquarters
Section Chief, Production
Technology
Mr. Shinichi Masauchi



Residential area right next to NewTon

Results after installation

Excellent freezing performance and natural refrigerant system

"The three main differences from previous models are energy efficiency, cooling speed, and operating time."

(Masauchi)
Compared with the previous year, energy efficiency averages 30% or more, and up to 40% depending on the month for reduced power consumption.

The combination of the NewTon system and spiral freezer with air defrost function, which was updated at the same time, results in 21 hours of continuous operation, increased from the previous 16, thereby improving productivity. These changes have resulted in savings of approximately 4 million yen in maintenance costs.



The next step

Considering installation in other branches

Installation of the NewTon system at the Chiba branch was highly praised as a way to save electricity, resulting in Kobeya winning the Business with Excellent Energy Management Award and the Kanto Bureau of Economy, Trade, and Industry Director's Award. There are now plans to switch to LED lighting within the branch.

"Every effort we made was to deliver our best-tasting bread to as many customers as possible. We plan on installing the NewTon system in one more of our two production lines. We are currently considering installing the NewTon system in our Osaka and Hyogo branches as well."

(Mr. Nakajima, manager)

