

CASE STUDY 1

DATA CENTER

14 USX modules ensure the secure operation of a data center.



Project Period

December 2015 – May 2018

Installed Units

„Universal Smart X“ (14 USX modules)

PROBLEM STATEMENT

The client is working on an Internet data center and contact center project in Okinawa. They were struggling with a 16-year-old screw chiller that had become unreliable and inefficient,

threatening comfort and driving up the company's energy and maintenance costs. In addition, for data centers, a reliable 24-hour, 365-day operation is required.

SOLUTION

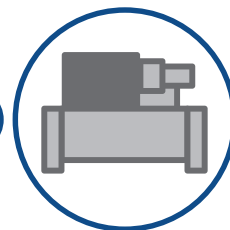
To meet the requirements of 24-hour / 365-day operation and high efficiency, the customer chose TOSHIBA. A modular design was recommended to minimize the risk of failure. To meet this, TOSHIBA supplied 14 units of the Universal Smart X.

- The USX offers:
- Precise temperature control according to load changes is highly efficient with inverter control.
 - Small footprint with the unique modular design.
 - Risk diversification with backup operation for each modular unit.

BEFORE



Screw Chiller



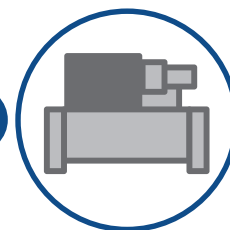
Centrifugal Chiller



AFTER

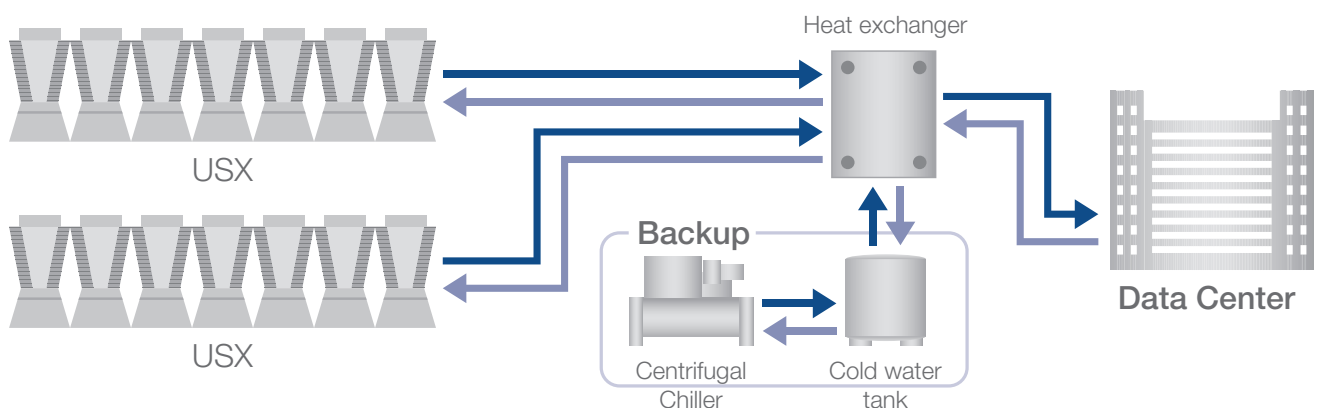


Universal Smart X



Centrifugal Chiller
(Backup)

System Overview





Universal Smart X



Anti-vibration foundation



Server room

EFFECTS

The USX's high-efficiency operation delivers superior energy savings and reliability.

1. The air-cooled USX Chiller reduces energy costs by approximately 15% per year for the entire building. This is more than initially expected.

2. The modular design avoids shutdown even when maintenance is being performed.

CUSTOMER'S OPINION

For our building, continuous operation is required with better efficiency and lower costs.

The TOSHIBA system has enabled us to do this easily and accurately controls the operation. The energy cost savings turned out to be higher than originally estimated.