

Project information

Caribbean Cinemas Theater building
Carolina, Puerto Rico

305 Tons of HVAC

- 15 Lennox VRF® condensing units.
- 9 ELA handlers from Elite® series and 1 CBX25 from Merit® series.
- 26 Ultra Emergence® Package Units

The Lennox advantage

The versatility and easiness of the Lennox VRF condensers' configuration along with the commercial air handlers, integrating them to the project with the package units

THE CHALLENGE

To configure different HVAC systems in a single control panel and, at the same time, offer an energy efficient solution with very low noise, and no vibration

WHY LENNOX

Due to its broad portfolio of cutting-edge products and technologies that can be combined to offer an optimal solution adapted to the project requirements, in addition to the service and technical support of ACE Refrigeration.

ABOUT THE BUILDING

The building where the Caribbean Cinema of Plaza Carolina is located is approximately five years old. After Hurricane Maria, which struck the island in 2017, the owners had the need of remodeling the movie theaters, adding some of IMAX, CXC & 4DX format.

PROJECT CHALLENGES

The owners of Caribbean Cinemas had two challenges. One was the control system, because this project required the integration of all their HVAC equipment to the same control center.

The second challenge was to provide a solution with very little noise and vibration operation. This requirement is critical for the operation of IMAX, CXC & 4DX rooms, whose sound system is based on high definition



THE SOLUTION

The solution installed by Lennox combined several systems and technologies that, due to its characteristics, are better adapted to each space, thus providing the ideal solution for the whole project. This type of project is what we call the "LennoxBundle."

Emergence Ultra High Efficiency package units were installed in the conventional rooms, which due to their design and technology are highly efficient and, along with their Prodigy controller, maximizes the operating benefits by offering high performance at low energy consumption. Additionally, for the IMAX rooms, Lennox VRF® condensers were installed connected to the indoor units: ELA handlers of Elite® series and CBX25 of Merit® series, using a conversion kit that allows the communication between VRF technology and the Elite® and Merit® air handlers series. These handlers were installed at a safe distance from the IMAX rooms to isolate noise and vibration in order to offer a superior experience of IMAX entertainment for their users.



All installed systems were configured to the same control center in the cinema operating room, so that the maintenance manager can easily monitor the operation of all equipment from his office, as well as schedule operating hours, check diagnostic alarms, and manage the turning on and off according to the demand of each cinema room.

THE RESULTS

The installation of the Lennox solution was completed on the scheduled date, November 2018, and has been successfully meeting the expectations of Caribbean Cinemas. The control of the temperature and the low level of noise have offered the users of the cinema an experience of entertainment and comfort. Another aspect to highlight is the satisfaction expressed by their owners given the energy savings achieved with the Lennox solution. It is important to mention that the cost of electricity is a priority element for any project in Puerto Rico. They have also expressed their satisfaction because of the constant service provided by ACE Refrigeration and the installer contractor MAC Mechanical.

SUMMARY

After Hurricane Maria, which severely affected Puerto Rico in 2017, the Caribbean Cinemas chain decided to remodel its establishment located in Plaza Carolina, Puerto Rico. The project faced several challenges: there was a fixed date for reopening the room, different systems had to be integrated in the same control panel, and a system of low noise and imperceptible vibration was needed. With these conditions in mind, an HVAC solution ("LennoxBundle") was installed, which not only allowed the opening of movie theaters on the required date, but also achieved energy efficiency within a framework of high flexibility; thus, the best possible experience can be offered to the client of the cinemas.

