ATLANTIS
THE PALM, DUBAI

CONTEXT

Customer
Atlantis, The Palm, Dubaï

Sector of activity
Hotel industry
Located Dubai, Emirats Arabes Unis
Year 2021

Equipment installed
6 HPV-W-HHT 592-C-1 units
= High efficiency heat pump
Water / Water
= Double-stage compressor
= All various electric motors
(compressors)
= Patented multi-tube condenser.
= Multi-tube evaporator

Description of the equipment
High-efficiency double-stage water-cooled heat pump

Total capacity
3700kW for water production at 70°C (6x 613kW)
COP greater than 3.13

> ## The Customer

The Atlantis Hotel, located at The Palm in the emirate of Dubai, is undoubtedly the most emblematic hotel in the Gulf, with its extraordinary structure, 1,500 rooms, 21 aquariums and 17 bars and restaurants. Standing proudly at the tip of the artificial atoll of Jumeirah, it is considered one of the most beautiful hotels in the world.

Atlantis Palm's technical department, through the intermediary of a renowned installer, approached us to optimize its heating system and replace its domestic hot water (DHW) production system, with the aim of optimizing energy consumption and complying with current electrical directives. To this end, we proposed a set of 6 high-performance heat pumps using the R134A fluid (in view of the climate, the wide operating envelope of the compressors, and the wide availability of this 0 ODP refrigerant in the area).Each of the heat pumps produces 613kW of power, with a water outlet at +70°C and a source at +10°C, from the Cooling District return water. Installed in the hotel's technical premises, and separated into two zones, the heat pumps operate according to a Master/Slave cascade logic, optimizing the energy consumption of the whole system. **12 months after its installation, the new system is meeting expectations not only in terms of reliability but also performance, with substantial savings of 3.9 million kWh and no emissions of 1.5 million kg of Co2.Translated with www.DeepL.com/Translator (free version)**