

**STULZ**

CLIMATE. CUSTOMIZED.



## An all-in-one solution

### From comfort airconditioning to air handling.

In collaboration with W. Tieleman B.V; STULZ realized a large project, early 2020, for the Corendon Mangrove Beach Resort in Curaçao. There were a number of challenges in this sunny location that needed attention.

In addition to supplying eight ClimaPac air handling units and more than 500 comfort airconditioning units from Mitsubishi Heavy Industries, STULZ has taken care of the controlling technology for the airconditioning units.

#### THE FACTS

##### Customer

W. Tieleman B.V.  
Corendon Mangrove  
Beach Resort

##### Hardware

ClimaPac LBK FDC  
FDK CompTrol  
FDT  
FTDC  
FDSX

##### Task

Supply + installing airconditioning, air handling and controlling.



## THE CUSTOMER

W. Tieleman B.V. is a building and construction company that takes care of several projects for hotels on national and international basis. The company takes care of projects in construction, infrastructure and landscaping. The company is responsible for the entire process.

As two international operating companies, STULZ and W. Tieleman B.V. matched well and this project could be completed in an efficient way.

## THE CHALLENGES

At first, the location was a factor that STULZ had to deal with. Not only regarding communication, but also the transport of the eight air handling units and 500 air conditioning units to Curaçao were a point of attention.

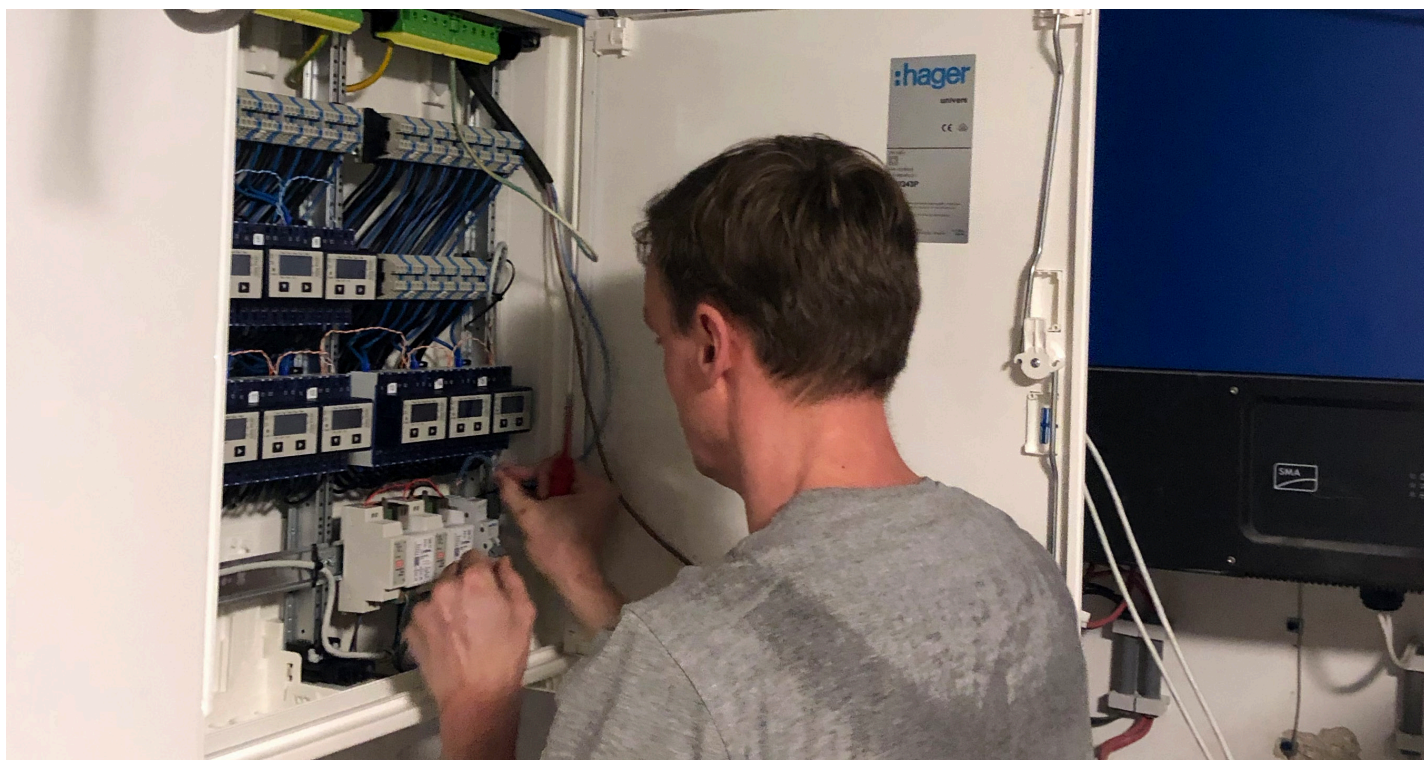
In addition, the controlling technology was new to the local installer, therefore, additional support was required. Local weather conditions also played a role during the project. Due to the high humidity, the different capacities, the installation of the units and the control technology needed extra attention.

## Corendon Mangrove Beach Resort



In consultation with the installer, there were a number of requirements that the STULZ solution had to meet. The air handling units had to compensate the extracted air in the kitchens with fresh air and had to cool it back so that the heat load in the building increased minimally by fresh air. In addition, the biggest challenge was to make the ClimaPac air handling units suitable for transport in sea containers. This was particularly a task for the units for larger air volumes, which was successfully completed.





## THE SOLUTION

To keep the entire project on the right track, STULZ has sent several service technicians from The Netherlands to Curaçao for, among other things, adjusting the control technology, installing the air handling units, airconditioning units and overseeing the project in general.

STULZ was able to realize a solution with eight air handling units with a nominal inlet temperature of 25°C. This keeps the temperature within the kitchen on a workable level. In this way, energy is saved while using the refrigerator. This greatly benefits the overall efficiency. A lower inlet temperature costs a lot of energy due to the high humidity on the island. Hence the choice for 25°C.

The air handling unit has an EC fan which is controlled in three steps by the controlling of Mitsubishi Heavy Industries in combination with the STULZ CompTrol DC. The compressors are inverter controlled and therefore slow down as soon as the sun sets. In this way, the cooling in the hotel can be provided in an energy-efficient manner. In addition to the air handling units and the aforementioned control technology, STULZ was responsible for the supply of various comfort airconditioning units from Mitsubishi Heavy Industries.

Because this is a hotel solution, there was chosen for redundancy, ie several smaller efficient systems of the KX series. As a result, the units in the hotel will not fail if an unexpected malfunction occurs in the system, and the solar panels still fit on the top of the building, which could not have been the case when all kinds of separate split units were used. The beautiful and quiet FDK indoor unit was chosen for the individual hotel rooms, making accessibility during scheduled maintenance optimal.

The FDTC and FDT indoor unit has been chosen for the 'living areas' such as the offices, the restaurant and the shops of the hotel because they have the best air distribution, without eliminating everything above the ceiling. In addition, the control technology from S-Klima has been applied, so the rooms never get warmer than 30°C, in addition to the comfort, this is important for the equipment present in the hotel room. In addition to this smart control, the energy consumption of each outdoor unit is also carefully monitored so that any errors or excesses can be detected by the local installer as quickly as possible.