



#### DESCRIPTION OF THE PROJECT

The Danish shipyard, Danyard received the order for this 79m (258 ft) luxury yacht designed by Espen Oeino Naval Architects and the interior designer Francois Zuretti in close cooperation with the owner.

The yacht is intended for use by up to 12 guests and the crew members on board are 26 persons. It is complete with cinema, beach club and any other luxury imaginable.

The yacht is among the most beautiful and most expensive yachts of the world.

#### CHALLENGES

Requirements for a luxury yacht are always challenging, and Princess Mariana was no exception. The challenge was to supply a system which would provide the correct temperature and humidity, and still be invisible and inaudible.

In the cabins and guest areas, the sound levels must not exceed 40 dB(A).

In the machinery space, it is important to have a low temperature along with a very strict sound level not exceeding 65 dB(A).

#### SOLUTION

In close cooperation with Danyard, Novenco performed a total HVAC design process in order to design the optimal solution for the yacht. The strict sound levels required Novenco to complete thorough sound calculations.

The result of the design process was to supply three air handling units for the accommodation along with cabin units intended for VAV systems.

For the engine room ventilation system, we supplied 3 sea water coolers, one supply fan and one exhaust fan to keep the required temperature in the engine room. Along with these items, a number of silencers were needed to satisfy the strict sound level demand.

SCOPE OF SUPPLY:

### SERVICES PROVIDED

System Design and engineering  
Project Management  
Sound Calculations

### PRODUCTS

3 Air Handling Units type ZCR in stainless steel  
Cabin Units MS, RS and RSX  
Water Chiller  
Exhaust and Return Fans  
Engine Room Ventilation System with Sea Water Coolers



Chiller Unit



Sea Water Cooler