



Avalon 3 Data Center, Italy

4 x 2640 kW | 10,56 MW@400 V

SUMMARY

Location: Milan (Italy)

Power required: 10 MW with power factor 0,8
(12,5 MVA DCP service according ISO 8528)

Power installed: 4x2640 kW = 10560 kW (13200 kVA)

Genset model: KD3300SWD

Version: soundproof shelter

Genset noise level: 70 dB(A)@7 meters

Dimensions: 14500 x 3000 x 7580 mm (L x W x H)

Fuel Tank: able to guarantee 24 h autonomy at full load

Remote communication: Modbus via TCP/IP port

Warranty: 66 months from delivery

Configuration: diesel genset installed inside a special soundproof shelter, rated 70 dB(A)@7 meters, with low noise remote cooling system and exhaust gas silencers mounted on the roof of the shelter. Both radiator and silencers are hidden by a special metal structure built on top of the DG shelter roof, accessible through caged stairs with landing platform and gate, compliant to local safety regulations.

Belly tank for 24 h of autonomy (at full load) with EI 120 Fire Resistance compliant steel panels.

PURPOSE

The customer has requested the supply and installation of nos. 4 Diesel Generators for his Data Center facility, each one equipped with a properly engineered configuration able to guarantee:

- Power Redundancy 3+1 for 7,5 MW + 2,5 MW
- Residual Noise level of 70 dB(A)@7m at full load conditions
- Belly tank for 24 h autonomy at full load
- Bus-bar power output
- Redundant electric starting system
- Provision for installation of fire fighting system (water mist type)
- Remote cooling system including HT and LT circuits
- TIER IV certification by the Uptime Institute



SOLUTION

Following a specific study and analysis conducted with the Customer, Ausonia designed and supply four generators, installed at site in redundant configuration (3+1), each one able to satisfy the requirements of the Uptime Institute for TIER IV certification.

This solution's design has involved multiple peculiarities. The provision of an upper floor built on the roof of the shelter, on which the remote radiator and exhaust silencers, both of special type for utmost noise abatement, have been installed and then hidden by an aesthetically pleasing metal structure. In order to allow easy access to the upper floor for service activities, the solution has been equipped with a caged stairs installed along the DG shelter wall and with a landing platform secured by a proper gate.

The suitable air ventilation to the system has been guaranteed by installing electro-fans inside the shelter, duly sized for an optimal cooling of the power plant.

Coping with the additional specific requirements of the Customer, the DG has been equipped with a belly tank having a capacity of 17000 liters of fuel for reaching an operational autonomy higher than 24 hours and with a retaining vat equipped with nos. 8 liquids detection sensors. The entire diesel fuel tank metal structure has been compartmentalised with EI 120 steel panels.

The DG has been also provided with an automatic control board suitable for parallel operation with additional gensets and with a remote monitoring and control system to be integrated with the facility control room.

