

50 MW TURKEY



HIMOINSA



HIMOINSA supplies emergency power to Ikitelli City Hospital, the largest earthquake-proof building in the world and one of the largest hospitals in Europe.

LOCATION:
Istanbul, Turkey

INSTALLED POWER:
25 x 2,500 kVA= 62.5 MVA

GENERATOR SETS:
25 units HTW-2295 T5 (Open skid)

SPECIAL CONFIGURATION:
Emergency generator sets to guarantee the power supply of the hospital

complex's facilities and buildings, working in parallel with the grid to ensure the flow of power in the event of a grid outage.

DEALER:
Yanmar Turkey

CLIENT:
Rönesans Holding and the Turkish Ministry of Health

50 MW of emergency power to Ikitelli City Hospital, Istanbul

Istanbul, with more than 15 million inhabitants, is the most populated city in Turkey and has the greatest number of inhabitants living in the same urban area in Europe. Such concentration poses a real challenge to public health services in delivering quality health services to the population. With this in mind, the Turkish Ministry of Health has developed the new Ikitelli City Integrated Health Campus, which will provide health services to this large metropolitan area of the city.

It is the third largest Public Private Partnership (PPP) Healthcare project implemented on Turkish territory to date. A healthcare city made up of a healthcare campus and eight buildings dedicated to specialist hospitals

located next to the campus, a building for management and logistics, another for technical service, three heli-ports and a tri-generation plant (a project still in progress that also incorporates HIMOINSA gensets). The total construction area is more than one million m2. Its facilities are expected to accommodate up to 60,000 visitors per day, and it incorporates more than 9,500 direct employees.

Due to the site's seismic activity, more than 2,000 seismic isolators have been incorporated to protect the facilities from possible seismic movement, making it the **largest building in the world protected by seismic isolators**.

HIMOINSA, together with **Yanmar Turkey**, has provided 25 HTW-2295 T5 diesel generator sets to provide 50 MW of standby power, in order to guarantee the continuous operation of the facilities in the event of a grid outage.

OBJECTIVE

Install an emergency power plant on the hospital grounds to guarantee 50 MW of power. Generator sets with a rapid response capacity to any grid outage, that can operate independently or in parallel for as long as necessary, providing 100% of the load. The site is fed by two connections to the public grid; the moment the first one fails, the second starts working, and in event the second one fails, the generator sets will start working to guarantee the entirety of the supply.



SOLUTION

Open skid generator sets with high mechanical resistance engines and a resized radiator, connected to an independent transformer and a fuel inlet with external tanks, providing greater autonomy for long periods of use. These gensets are distributed among rooms; two or three generators per room.



Efecan Ülkü, Energy Systems Manager of Yanmar in Turkey, assures that »HIMOINSA generator sets are the safest technology to deal with mission-critical applications, where an outage can have a tremendous impact on patient safety«, and adds that »the project has been subject to an exhaustive study by both companies to offer the optimum solution required by the client«.

Technical Specifications

The 25 HTW-2295 T5 gensets are equipped with a Mitsubishi engine and a tropicalised radiator resized for 50°, as well as vertical air outlets. These gensets are capable of starting up in a short period of time and can offer 100% of the load, preventing an outage from affecting what may be happening in surgeries, test benches, laboratories or hospital wards.

To ensure the highest level of soundproofing, the generators have been installed in soundproofed rooms, equipped with specially prepared air inlet and outlet points with vertical exhaust nozzles.

In order to enable them to be activated synchronized with the grid, the generators incorporate a Woodward 3500XT parallel control panel installed in the synchronization panel, and a ComAp AMF25 emergency control panel installed in the generator for an easy maintenance. This way, the amount of power required can be selected, as well as the number of units needed for use at any given time.

HTW-2295 T5
25 x 2.500 kVA

