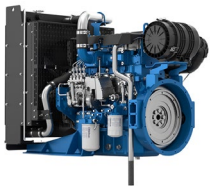

## Overview

**CASE STUDY:**
Baudouin | EMSA Generator | Starbucks Türkiye

**PRODUCTS:**
760 x Baudouin 4M10/4M11 PowerKit Engine



**ENGINE DISPLACEMENT:**
4M10 = 4.1 litres 4-cylinder turbocharged diesel

**AVERAGE TOTAL POWER OUTPUT:**
760 x 80 kVA = 60 800 kVA

**DUTY:**
ESP – Emergency Standby Power

**APPLICATION:**
Commercial backup power for retail cafés

**PARTNERS:**
OEM: EMSA Generator
INSTALLATION: Starbucks Türkiye

**Starbucks Türkiye**

**EMSA Backup Power with Baudouin PowerKit Engines**

Starbucks has rapidly expanded in Türkiye, operating around 760 stores nationwide as of 2025. With such a wide footprint, uninterrupted operations are critical, as even brief power outages can disrupt equipment, payment systems, lighting, and climate control. To safeguard its customer experience, Starbucks Türkiye equipped its cafés with on-site diesel generator sets, ensuring continuity during any mains power failure.

To deploy this solution, Starbucks Türkiye partnered with EMSA Generator, a leading Turkish OEM. All new stores are fitted with dedicated diesel gensets, while existing outlets have been progressively retrofitted, resulting in hundreds of units installed nationwide. Manufactured by EMSA and powered by Baudouin PowerKit engines, the generator sets include automatic transfer systems that detect grid outages and switch to backup power within seconds.

By standardizing on Baudouin-powered generator sets across its entire Turkish network, Starbucks simplifies maintenance, training, and spare parts logistics. In the event of a power outage, the backup generator automatically assumes the full electrical load of the café, allowing customers to remain in a well-lit and comfortable environment while baristas and equipment continue operating normally. Sensitive appliances such as refrigerators, POS systems, and IT infrastructure remain protected, preventing product loss and transaction interruptions.

The generator sets installed across stores operate in emergency standby (ESP) mode, remaining on standby under normal conditions and automatically starting within seconds during a grid outage via an automatic transfer switch. Designed for short-duration backup operation, Baudouin's ESP-rated engines ensure reliable performance and uninterrupted café operations. Compact and sound-attenuated, the gensets integrate easily into urban café environments, with optional noise-reduction solutions available from EMSA where required.

The typical generator set installed in a Starbucks building ranges from 70 to 90 kVA, comfortably covering peak electrical demand, including coffee machines, lighting, air-conditioning, refrigeration, and payment systems. These gensets are powered by Baudouin's modern 4-cylinder turbocharged engines from the 4M10 and 4M11 series. For example, the 4M10 platform delivers approximately 72 kVA at 50 Hz, while the larger 4M11 variants provide up to 90 kVA. Compact, robust, and fuel-efficient, these engines are ideally suited to standby applications, combining fast load acceptance with stable frequency and voltage control.

Originally developed for mission-critical applications, Baudouin PowerKit engines offer high reliability, long maintenance intervals, and excellent fuel efficiency, minimizing operating costs during outages and routine test runs. They are also designed to operate at ambient temperatures of up to 50 °C without power derating, a key advantage in Türkiye's hot summer climate. Supported by EMSA as a single, local OEM partner providing integration, installation, spare parts, and service, this nationwide deployment delivers a robust and cohesive backup power solution, ensuring that every Starbucks café in Türkiye is ready to keep operations running, whatever the condition of the local power grid.