

# POWER PROFILE

**Customer:** DataSpace

**Location:**

Moscow, Russia

**Customer Business Issue:**

Backup power supply for Uptime Institute-certified data center

**Solution:**

Six Cat® 3516B diesel generator sets

**Cat® Dealer:**

Zeppelin Power Systems



*DataSpace is the first data center in Russia to receive the Uptime Institute's Tier III certification for design, installation and operation.*



*Together with Cat® dealer Zeppelin Power Systems, DataSpace designed an infrastructure featuring six Cat 3516B diesel generator sets to provide reliable backup power.*

**POWER NEED**

DataSpace has pioneered the Russian data center arena by offering reliable space, equipment and bandwidth for leading Russian and multinational financial institutions and telecoms operating in Russia.

Its Moscow facility is the first data center in Russia to receive the Uptime Institute's Tier III certification for design, installation and operation. The certification confirms that the data center can take any critical component offline to inspect, maintain or replace at anytime without causing customer downtime.

DataSpace's Moscow operations function as a stand-alone facility composed of networked computers and storage. Businesses and other organizations rely on DataSpace to organize, process, store and distribute large amounts of data with 100 percent uptime.

"We live in a world where the quantity of information is increasing with every passing second. It is imperative that this data is protected and stored," said Sergey Rasskazov, general director at DataSpace.

During the design phase, DataSpace sought a reliable source for backup power to ensure secure data transmission and storage, combined with availability. However, given the facility's location in the central part of Moscow, physical space and natural gas lines were limited, leading DataSpace to seek backup power with a compact footprint that runs on diesel fuel.

**SOLUTION**

Together with Cat dealer Zeppelin Power Systems, DataSpace designed an infrastructure featuring six Cat 3516B diesel generator sets, each capable of delivering 2 MVA of backup power to a specific channel

of energy supply throughout the building. This configuration allows a single generator set to be shut down for periodic maintenance without impacting the performance of the remaining five generator sets.

"Every element of the infrastructure is crucial, including how it is designed, built and operated," said Nikolay Shemetov, technical director at DataSpace. "Together, they create a subsystem that delivers the continuity of service our customers need for the IT systems that underpin their business processes."

Each generator set meets ISO 8528-5 transient response requirements and accepts 100 percent rated load in one step. Featuring an EMCP 4.2 control panel, the Cat 3516B generator sets also offer expanded engine and generator protection and monitoring.

**RESULTS**

The Cat backup power solution has worked flawlessly to provide critical backup power since the data center was commissioned in 2012. Shortly after the facility opened, Cat generator sets automatically started up to supply power when a high-voltage municipal power line was damaged in a neighboring district, interrupting power from the grid.

Zeppelin Power Systems provides the service and maintenance to keep the generator sets run ready. Dealer technicians safeguard operational availability of the diesel generator sets through weekly, bi-monthly and annual maintenance procedures.

"Each generator set is tested at 100 percent load once a year. When running for at least four hours, there should be no faults or even pre-conditions for a fault," Shemetov said.

For more information, please visit [cat.com/powergeneration](http://cat.com/powergeneration)

