

# Sberbank – Moscow (RU)

## Siemens BMS for HVAC system of the largest data centre in Europe.



Sberbank Data Center, winner of the “Innovation in the Mega Data Center” for the high level of efficiency, is TIER III certified and one of the largest in Europe ...

Sberbank is one of the largest financial institutions in Russia. Their data centre, the largest datacenter in Europe, is constructed within an existing campus facility in Yuzhny Port in Moscow.

The Data Centre consists of three floors of white space, a floor with electrical installations and a floor of support facilities. The solutions supporting the datacenter are based on the most effective energy saving technologies available. These are in line with global best practices. Very strict requirements are met regarding reliability and sustainability.

The total area of the datacenter facility is approximately 16,500 m<sup>2</sup>, while the total IT room space covers 5,000 m<sup>2</sup>. Successful cooperation of Russian and Irish construction teams has made it possible to build a unique complex datacenter in a very short 15 month period.

The system consisted of 27 Primary Air Handling Units (PAHU) for the cooling of the data centre across 5 floors.

Each PAHU has its own electrical and control panel with Siemens PX BMS controllers.

Each PAHU consisted of a primary and secondary air supply, through a heat exchanger. One of the main challenges was climate: extreme temperatures, from -30°C to +40°C, mean that the BMS needs to be a well commissioned system.

Building Energy Solutions

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### CLIENT

RMI, Ireland

### FINAL CLIENT

Sberbank

### LOCATION

Yuzhny Port, Moscow  
Russia

### SERVICES PROVIDED

Siemens Controls: 1700  
hardwired I/O;  
216 VSD drives on Primary Air  
Handling Units;  
Integration with local vendor into  
BMS front end.

### VALUE OF SERVICE

€940,000

### DURATION

March 2011 to Sept 2012

### REFERENCE CONTACT

Mr. Cem Sayinsoy Project  
Manager Tel: +7495 739 4742

### PARTNERS

RMI Mercury

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Each PAHU contains:

- mixing section
- heat exchanger
- adiabatic cooling
- humidifier
- two DX coils supplied by DX units with Turbocor compressors
- 8 fans (4 on the primary and 4 on the secondary)

The BMS communicates using BACNET over LON and BACNET over IP. Dynamic control of PAHU's supply and return fans is achieved using integrated variable speed drives for control of flow rate. The BMS is integrated with a site data historian.

The BMS system, which uses Designo Insight for graphical display, is also interfaced with other local equipment controls specialists.

Sirus carried out the final Building Management System tests, assisting the client to achieve the Uptime Institute Tier III certification for the facility.



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