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Transforming Urban India

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Siemens Mobility Division has delivered the core rail systems of the Rapid Metro Rail Gurgaon project. Phase I of project commenced passenger operations on the 6.1KM metro line in Gurgaon in November 2013 connecting cyber city to the Delhi Metro rail network through an inter-change station at Sikandarpur.

Southbound Extension-Phase II of this project is also operational from March 2017 and total 12 Automated Trains are now operational.

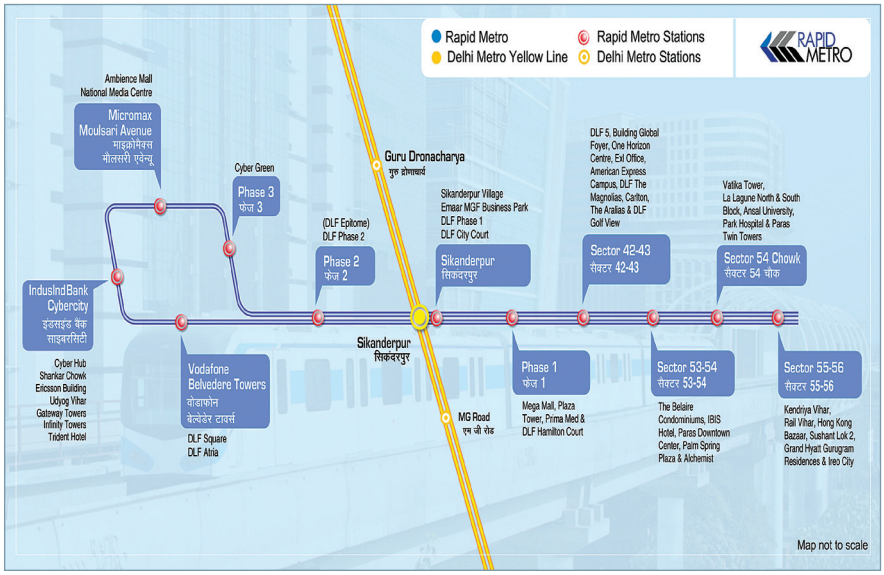
Rapid Metro Rail is a landmark public transportation project and has given Siemens an opportunity to prove its prowess as technology partner to provide state-of-the-art transportation solutions on turnkey basis.

Rapid Metro Rail Gurgaon has installed the latest third rail electrification, signaling system, state-of-art rolling stock from Siemens along with major depot workshop equipment.

Siemens was also responsible for design, system integration and interface management.

In addition, Siemens was awarded a 10 year comprehensive preventive and corrective maintenance contract for electrical and mechanical systems of Phase I.

System ensures 120 seconds peak time headway with capacity of about 30,000 passengers per hour with about 1000 passengers per train.



Quick Facts

Train

- Number of Trains: 12
- Number of Coaches per Train: 3
- Average speed: 30 km/hr
- Train frequency: 4-5 minutes

Network

Interchange station: Sikandarpur
Length: 12KM Apprx.
Number of Stations: Total 11
Location of Stations :

- **Sikanderpur**
- **Phase 2**
- **Vodafone Belvedere Towers**
- **IndusInd Bank Cyber City**
- **Micromax Moulsari Avenue**
- **Phase 3**
- **DLF : Phase 1**
- **Sector 42/43**
- **Sector 53/54**
- **Sector 54 Chowk**
- **Sector 55/56**

Salient features

Rolling stock

- Supplied 12 modern trains with 3 cars each made of aluminum
- Trains have been designed for a service life of 30 years
- Every train is air-conditioned and is able to carry around 1000 commuters comfortably
- Trains are capable of fast acceleration and deceleration maintaining a high degree of ride index
- Best-in-class MTBF (Mean Time Between Failure)
- Train availability is >99.5% – on time, reliable, secure and efficient
- Train will regenerate power and re-feed the line during braking. Regenerative braking technology will help reduce carbon emissions and will earn valuable carbon credits under UN's Clean Development Mechanism
- Best energy efficient propulsion system which features electrodynamics brake possibility up to zero velocity. This also reduces the wear rate of brake pad and saves maintenance cost
- Selective closure of only those doors that detect obstacles

Electrification

- The line as been electrified by installed 750 V DC traction power supply system using third rail current collection
- Low voltage power is supplied from auxiliary substation for commuter services at stations
- Power is drawn from 66 KV grid which is stepped down to 11 KV medium voltage and supplied to various sub-stations
- Third rail system is safe, reliable and aesthetically pleasing
- In emergency situation, a push button can isolate a section and stop a train
- System is redundant to guarantee high availability

Depot Workshop Equipment

- Under Floor Wheel Lathe Machine
- Mobile Lifting Jacks
- Re-railing Equipments & Rescue Vehicle
- Electric Overhead Crane
- Bogie Turn Table
- Hydraulic Sky Lift
- Measuring Instruments
- Train Shunter

Signaling system

- Supplied the signaling system for safe and efficient operation of Rapid Metro
- Trains run automatically during normal operation
- Optimum power consumption by coasting and cruising
- Automatic time table adjustment
- All train operations are monitored at Operation Control Centre (OCC)
- In Auto mode (ATO), a train operator is required only to close the doors and to start the train at stations
- Signaling systems can provide trains at a frequency as less as every two minutes
- Trains stop within a stopping accuracy of 50 cms enabling the door to open at correct position every time
- Provides real time data to passenger information system
- Compliant with highest standard – SIL4

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