



Press Note

What it takes to make it a legendary Metro

Specifications of Hyderabad Metro Rail Rolling Stock (Train Coach)

Comfort and luxury comes at a price but if this is something which is within our reach and does not hurt our pockets, then any and everyone will make a beeline for it. Metros around the world are there to give comfort to the commuter and at a price which is easy on the pocket. India's millions and the especially the denizens of Hyderabad will be in for this experience in few months.

The specification for standard gauge Rolling Stock is based on light weight stainless steel bodied three-car formations, having a trailer car between two motored driving cars. Internal double bellow gangways with panel type will provide ease of passenger movement, and better noise reduction and provide good aesthetic. As the ridership picks up, these trains can be augmented to six car long trains by adding three more cars to cater them.

Trains will be air-conditioned throughout with designated space for differently abled persons. 24 numbers of 18.5 inches LCD screen type dynamic route map indicators over all the doors and 12 numbers of 24 inches LCD TVs at suitable locations inside cars shall be provided for infotainment. Safety of commuter and operations is paramount for us and the trains will have foolproof safety features and on-board fire & smoke detection as well.

These trains will have CCTV cameras in and outside of the cars, mobile and laptop charging sockets inside the cars, humidity control, microprocessor-controlled brakes, and secondary air-suspension for better ride comfort. Trains will be capable of maintaining an average speed of 33 km/h and attain a maximum operating speed of 80 km/h. The trains will be using regenerative electric braking thereby converting the momentum into electrical energy and feeding back to power supply system while braking. As a contribution towards the CDM this will reduce the energy requirement from the grid.

The maximum capacity per three car train with AW4 loading will be 974 including longitudinal seating, giving a high proportion of the floor area to standing passengers.

AW4 Condition: Full Seated with Standing Passengers @ 8/m²

Type of Car	DM	T	DM	Total
Seating Capacity	40	46	40	126
Standing Capacity	275	298	275	848
Total Capacity	315	344	315	974

Total 57 Trains will be procured for the first phase of the project. Although with many automated functions, the ATO enabled trains will be under driver supervision.

Having all salient features which will add to the comfort and safety of the commuter, it is aesthetics combined with comfort and safety which will win the metro-user and make them addicted. Our endeavor is to provide best ever train in India for Hyderabad Metro.

Following are salient features provided on Hyderabad Metro that is the first time on any Metro in India:

- i. LED Type Lighting in cars, Head Light and Marker lights.
- ii. 18.5 inches LCD screen type dynamic route map indicators.
- iii. 24.0 inches LCD TV on car walls for infotainment.
- iv. Aesthetically beautiful Gangway with double bellow and single panel in the interior.

Salient features of Rolling Stock	
Train Set	3 Cars train set (DMC-TC-DMC) Extendable to 6 Cars train set (DMC-TC-MC-MC-TC-DMC)
Gauge	Standard Gauge (1435 mm)
Traction	25 kV AC Overhead Catenary, Single phase and 50 Hz frequency
Maximum Design Speed	90 kmph
Maximum Operating Speed	80 Kmph
Average Speed	33 kmph
Dwell Time	20 seconds at stations and 30 seconds at terminal stations
Maximum Axle Load	17 Ton
Safety features	Automatic Train Protection (ATP)/ Automatic Train Operation (ATO)
	Automatic Train Supervision
	Passenger Emergency Alarm
	Passenger Addressing System
	CCTV surveillance in cars
	Saloon Door opening and closing Alarm
	Fail Safe Pneumatic Emergency Air Brake

	Provision of Dead man safety feature on the Traction-Brake controller handle
	Wheel Slip/Slide Protection
	Crash-Worthy design of Cars
	Derailment Guard on rails
	Smoke and Fire detectors in Driver's Cab and Saloon Car
	Fire extinguishers inside cars and driver's cab
	Emergency brake application in a moving train if unintended partings of the cars occur.
	Platform screen door enable features in Rolling Stock
	Front Evacuation of Passengers in Emergency
Car Body	Light Weight Stainless Steel
Energy Efficient	Energy regeneration during electro dynamic braking.
Interior	Dedicated space to accommodate wheelchair (for people with reduced mobility)
	Longitudinal Seats, Grab Poles and Rails for standing passengers
	Air-conditioned with Humidity Control
	Mobile and Laptop Charging Points
	LCD TVs for Entertainment, information and advertisement
	LCD TV type Dynamics Route Display
Exterior	Modern and Aesthetic, unpainted, covered with vinyl sheet for advertisement
Lighting	LED Type Lighting in cars, Head Light and Marker lights.
Current Collection System	Overhead Pantograph
Doors	Externally hung, sliding bi-parting Doors for Saloon

Windows	Double Glazed Laminated glass with PVB film pasted in between
Brakes	<ul style="list-style-type: none"> a) Electro-pneumatic friction brake system (EP) b) Electric-regenerative brake system c) Spring applied air-release parking brake system d) Electro-pneumatic friction emergency brake system e) Brake-pipe controlled back-up security brake system
Gangway	Aesthetic single panel inside of Double bellow gangway
Couplers	Automatic and Semi Permanent Couplers
Air-conditioner	Two Roof mounted VAC for Saloon and One for Driver Cab
Propulsion System	25kV AC Single phase, IGBT based VVVF Control
Bogie	Bolster less bogie with Secondary Air Spring
Train Control	Train Integrated Management System (TIMS)
Battery Back-up	Battery Back-up upto one hour for emergency loads i.e Lights, PA/PIS etc.