

### TATA STARBUS HYBRID

#### Key highlights

- World's first commercially produced CNG Hybrid Bus, using Electric & CNG modes (BS IV compliant) as fuel
- Full low floor of 400 mm, based on Modular Chassis, which goes to 340 mm kneeling
- Complies with all UBS-2 (Urban Bus Specification), AIS 052 (Automotive Industry Standards) & CMVR (Central Motor Vehicle Rules) norms
- Lithium Ion Phosphate Batteries (Prismatic Cell) which are the latest in the new gen. Batteries
- Electronically Controlled Air Suspension (ECAS) at Front & Rear Electronically controlled Brakes System
- Automatic Transmission

Reiterating its commitment towards the environment and reducing carbon emissions, Tata Motors showcased the 12 meter Tata Starbus Hybrid at the Auto Expo 2016.

The Tata Starbus Hybrid Bus upholds one of Tata Motors core values of developing environment-friendly and efficient products, and technology leadership in the CV space. The Starbus Hybrid Bus is the future of rapid urban mass transportation system, with a signature single-deck design comprising two rigid sections linked by a pivoting joint. The vehicle is a full low floor 40mm bus that goes 340 mm after kneeling.

The Tata Hybrid Starbus offers substantial improvement in fuel economy compared to a conventional bus. The technology also leads to lower emissions, thereby contributing to cleaner and greener air.

The vehicle uses CNG & electric in series hybrid mode, to propel the vehicle that complies with all UBS-II (Urban Bus Specifications), AIS 051 (Automotive Industry Standards) and CMVR (Central Motor Vehicle Rules). The vehicle works on an Electric Mode producing Zero emissions, while the CNG mode is BS4 compliant. The bus is based on a modular chassis, with electronically controlled air suspension systems (ECAS) at the front & rear, electronically controlled braking systems and an automatic transmission. The Starbus Hybrid also uses new generation lithium ion phosphate batteries (Prismatic Cell).

A radical new transport option, the Starbus Hybrid Bus creates a win-win situation for all stakeholders. Transporters get the benefits of more passengers and a least polluting fleet vehicle, while commuters get a cost-effective transport choice, with increased comfort, safety and easy accessibility.

Tata Motors has successfully tested Hybrid buses in Indian and Global markets. In 2010, Tata Motors the Tata Starbus Hybrid, to the Delhi Transport Corporation (DTC), on a trial basis, during the Commonwealth Games. Similarly Hybrid buses are already in operation in Madrid, Spain, with a series hybrid system, together covering more than 4 Lakh kms.

#### Tata Motors Buses

Tata Motors is the country's largest bus manufacturer with the most complete range of transit vehicles that meet day-to-day needs of commuters. The company has continued to be a leader in this segment not just by setting technological benchmarks, but by adapting innovations effectively to suit Indian travel conditions. Tata Motors has also developed a wide variety of buses and coaches that cater to the entire gamut of buses – from luxurious inter-city travel options, to safe transport choices for school going children.

Besides its partnership with ACGL of Goa, Tata Motors also has a joint venture with Marcopolo S.A. of Brazil, one of the largest bus body manufacturers in the world, for fully-built bus (FBV) solutions, with greater average speeds, safety and comfort, for a 'Metro like feel'. Tata Marcopolo's approach of

manufacturing FBVs, meets the government's new norms of bus body building, as per AIS norms (Automotive Industry Standards), in terms of safety, fuel efficiency, wider bus gangways, with the flexibility to be powered by both CNG and Diesel. With a whole range of coach designs, e.g. microbus, intercity and touring coach, Tata Motors is able to actively participate in the development and implementation of solutions for mass passenger transport in the worlds' main markets.

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