



High on performance,
safe on the environment





The rapid industrialisation of India in recent years has triggered its high economic growth. This in turn has led to a boom in private and public transportation, leading to an increase in the number of cars and buses on road. The result is traffic congestion and, consequently, noise and air pollution, especially in cities.



The need of the hour is to reduce dependence on private vehicles by offering a clean and efficient means of public transportation that spends less on fuel. The Government of India is encouraging the manufacture of such vehicles, leading to a growing demand for CNG buses that are sleek, comfortable and highly fuel efficient. It is expected that more and more private car owners will switch to CNG buses for their daily commute, leading to a reduction in traffic congestion and pollution.

Moreover, a CNG bus offers several advantages over a regular bus. It is a cleaner means of transportation, thanks to higher fuel efficiency, lesser emission, and lesser running & maintenance costs. Above all, it is an environment-friendly vehicle.

TATA
Starbus





CNG buses have come a long way

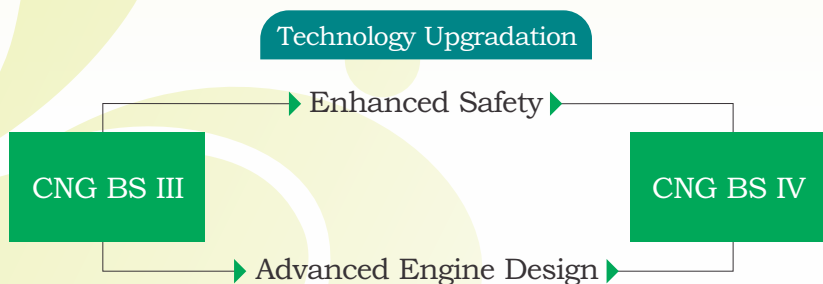
In India, CNG buses are catching on in many cities as a means of cleaner and more fuel efficient transportation, especially with state transport undertakings. The first CNG bus introduced in India met BS II emission standards; thereafter, these buses evolved to meet BS IV standards. On its part, Tata Motors made its first contribution to the cause of clean transportation in 1999, when it introduced the 1510 CNG BS II Chassis in Delhi. Since then, the Company has constantly innovated and diversified its portfolio of CNG buses, manufactured at its modern, fully equipped plant in Lucknow, U.P.

Tata CNG Buses in India & abroad

A wide range of Tata CNG Buses are available in Low Floor and Semi Low Floor models, for Bus Rapid Transit System (BRTS) and public transportation in cities. What's more, these buses are being exported abroad in a big way. Today the CNG portfolio of Tata Motors has grown to include:

- CNG Chassis in 4-ton, 9-ton & 16-ton options
- Fully Built CNG Buses available in 24-seater to 40-seater capacities
- CNG City Buses with customised seating as per customer needs in standard floor height and low floor options

The latest addition to the Tata Motors CNG portfolio is **Starbus Hybrid** - the CNG Electric Parallel Hybrid Bus.



Continuing an innovative journey

Tata Motors has always been known for its track record of innovation, which has enabled it to offer vehicles that meet the needs of customers in various segments. The same tradition continues with its portfolio of CNG buses in which it has now incorporated the **Sequential Gas Injection (SGI)** technology.

Engine Technology - Sequential Gas Injection

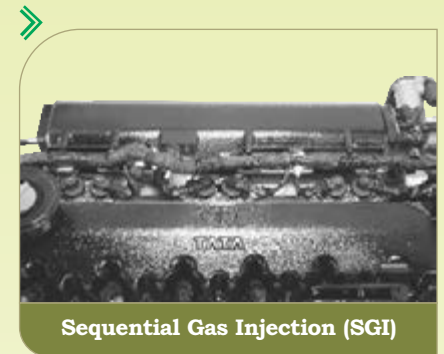
A highly successful technology in cars, SGI is a first for commercial vehicles in India. This technology ensures better fuel economy, thanks to the use of two unique strategies:

- **Skip firing strategy** - During idling, half the cylinders are de-activated, to save on fuel consumption.
- **Fuel cut-off at deceleration** - Fuel cut-off during deceleration & zero pedal condition, to decrease fuel consumption.

This is besides other **engine features** that include separate intake runner and separate exhaust port for each cylinder. The prime one is based on drive-by-wire technology, also known as **electronic throttle control**.

New Gear-Driven Compressor

The new gear-driven compressor in the Tata Range of CNG Buses offers three major advantages. It increases fuel efficiency, reduces failures caused by belt warpage, and ensures the supply of air, unlike in belt-driven compressors where air supply is dependent on the condition of the belt.



Sequential Gas Injection (SGI)



Electronic Throttle Control



Gear-Driven Compressor

The bus to a world of customer benefits

With their innovative SGI technology and eco-friendly features, Tata CNG Buses offer many benefits to customers, such as:

- Better fuel economy
- Lower maintenance costs
 - Robust and reliable engines with better performance
 - Inbuilt vehicle road speed limiter (RSL)
- Better vehicle transient response & driveability
 - Onboard diagnostics
 - Full electronic control

Features that stand apart



ACE - ECU

Tata CNG Buses come with a host of features that make them stand out for their performance and eco-friendly advantages.

ACE - ECU: Controls the Stepper motor & pressure regulator, for efficient & effective performance.

Coil-On Plug: The coils are mounted directly on the spark plug, thereby reducing the electricals - for easy fault diagnosis system, with higher uptime and low maintenance.

Stepper Motor: This distribution-less ignition system ensures perfect gas-air mixing for maintenance-free efficient operation.



Catalytic Converter: Ensures safety with complete combustion of unburnt gases, if any, and also meets emission norms.

Clutch Booster: Reduces clutch pedal effort by 30%, leading to reduced driver fatigue and more clutch life.

Igniter ECU: The ignition is electronically controlled by the igniter ECU, leading to reliable & efficient engine performance.



High Pressure Filter & Solenoid: System fitted with high pressure CNG filter and high pressure solenoid, for additional safety.

Slow & Fast Filling Points: User-friendly options of slow & fast filling, to enable CNG filling at all CNG stations.



Swagelock Fittings: Superior leak proof and high reliability cylinder valves & piping fitted with safety device.



Battery Cut-Off: Battery cut-off switch to enhance safety standards as it disconnects the electricals from the system when the bus is stationary or at night halt.



Anti-Roll Bar: Prevents rolling tendency of the bus, thereby adding to safety & stability at high speeds, ghat sections & rough roads.



Swagelock Fittings



Battery Cut-off



Igniter ECU



High Pressure Filter & Solenoid



Coil - On Plug & Stepper Motor



Catalytic Converter



Slow & Fast Filling Points

Additional safety measures

Tata CNG Buses are equipped with additional safety features that ensure peace of mind, such as:

CNG Cylinder Valve

CNG High Pressure Service Shut-off Valve

NGV Receptacles

CNG High Pressure Regulator

CNG Pipelines (High Pressure)

TATA
Starbus



Unmatched offering from two renowned names

Tata Marcopolo Motors Limited (TMML), the company that brings you Starbus, is a joint venture between Tata Motors Ltd. and Marcopolo S.A., Brazil. Tata Motors needs no introduction as India's largest automobile company and the world's second largest bus manufacturing company. Today, Tata Motors has a significant presence in Asia, Europe, Africa and Latin America, with over one million buses running on Indian and foreign roads. On the other hand, Marcopolo S.A., Brazil is the world leader in body building for buses and coaches.

Together, Tata Motors and Marcopolo S.A., Brazil have brought a unique blend of customised features to Starbus. These features make Starbus the best-in-class bus that's suited for different applications, including transportation of office staff and school children, and transfers of hotel guests.



LP 407/34

| | |
|-------------------------|--|
| Engine | Tata 3.8 SGI BS IV Engine; Water-cooled naturally-aspirated, direct injection CNG engine |
| Max. Power | 62 Kw (85 HP) @ 2500 rpm |
| Max. Torque | 270 Nm @ 1200-1500 rpm |
| Gearbox | GBS-27 synchromesh; 5 forward + 1 reverse |
| Clutch Diameter | 280 mm single plate dry friction type |
| Suspension | Semi-elliptical leaf spring at front and rear; hydraulic double acting telescopic type at front and rear; anti-roll bar (front & rear) |
| Tyre Size | 7.5 x 16 - 16 PR Radial |
| Steering | Power steering |
| Brakes | Vaccum-assisted dual circuit hydraulic with tandem master cylinder |
| CNG Cylinder Capacity | 310 litres / 245 litres / 180 litres |
| Wheelbase | 3400 mm |
| Front Overhang | 1275 mm |
| Rear Overhang | 1940 mm |
| Overall Length | 6615 mm |
| Max. Width | 2140 mm |
| Turning Circle Diameter | 12.3 m |
| Max. Speed | 94 kmph |
| GVW | 6520 kg |
| Electricals | Battery: 12 Volts, 120 Ah; Alternator capacity: 65 Amps |



LP 909/49

| | |
|-------------------------|--|
| Engine | Tata 3.8 SGI BS IV Engine; Water-cooled naturally-aspirated, direct injection CNG engine |
| Max. Power | 62 Kw (85 HP) @ 2500 rpm |
| Max. Torque | 270 Nm @ 1500-1800 rpm |
| Gearbox | GBS-27 synchromesh, 5 forward + 1 reverse |
| Clutch Diameter | 280 mm single plate dry friction type |
| Suspension | Semi-elliptical leaf spring at front and rear; hydraulic double acting telescopic type at front and rear; anti-roll bar (front & rear) |
| Tyre Size | 8.25 x 16 -16 PR |
| Steering | Power steering |
| Brakes | Dual circuit full air S-Cam brake |
| CNG Cylinder Capacity | 480 litres / 390 litres / 300 litres |
| Wheelbase | 4920 mm |
| Front Overhang | 1275 mm |
| Rear Overhang | 2700 mm |
| Overall Length | 8895 mm |
| Max. Width | 2140 mm |
| Turning Circle Diameter | 17.5 m |
| Max. Speed | 84 kmph |
| GVW | 9400 kg |
| Electricals | Battery: 12 Volts, 150 Ah; Alternator capacity: 65 Amps |



LPO 1613/55

| | |
|-------------------------|--|
| Engine | Tata 5.7 SGI BS IV; Water-cooled, Stoichiometric, naturally-aspirated CNG Engine |
| Max. Power | 96 Kw (130 HP) @ 2500 rpm |
| Max. Torque | 405 Nm @ 1250-1500 rpm |
| Gearbox | G-40 synchromesh; 5 forward + 1 reverse |
| Clutch Diameter | 330 mm single plate dry friction type |
| Suspension | Front - Weveller semi-elliptical leaf spring; Rear - leaf spring / pneumatic suspension; anti-roll bar at front & rear |
| Tyre Size | 11 R 22.5 - 16 PR |
| Steering | Power-assisted hydraulic |
| Brakes | Dual circuit full air S-cam NGT brake system |
| CNG Cylinder Capacity | 5 cylinders - 650 litres |
| Wheelbase | 5545 mm |
| Front Overhang | 2250 mm |
| Rear Overhang | 3325 mm |
| Overall Length | 11120 mm |
| Max. Width | 2434 mm |
| Turning Circle Diameter | 20.4 m |
| Max. Speed | 75 kmph |
| GVW | 16200 kg |
| Electricals | Battery: 12 Volts, 150 Ah; Alternator capacity: 90 Amps |



Starbus 24 CNG & Starbus Skool 26 CNG

| | |
|-----------------------------------|---|
| Chassis Platform | LP 407 / 34 BS IV CNG |
| Engine | Tata 3.8 SGI BS IV Engine; Water-cooled naturally-aspirated, direct injection CNG engine |
| Max. Power | 62 Kw (85 HP) @ 2500 rpm |
| Max. Torque | 270 Nm @ 1200-1500 rpm |
| Gearbox | GBS-27 synchromesh; 5 forward + 1 reverse |
| Clutch Diameter | 280 mm single plate dry friction type |
| Suspension | Semi-elliptical leaf spring at front and rear; hydraulic double acting telescopic type shock absorber at front and rear; anti-roll bar (front & rear) |
| Tyre Size | 7.5 x 16 -16 PR Radial |
| Steering | Hydraulic power steering |
| Brakes | Vaccum-assisted dual circuit hydraulic with tandem master cylinder |
| CNG Cylinder Capacity | 310 litres / 245 litres / 180 litres |
| Wheelbase | 3400 mm |
| Front Overhang | 1430 mm |
| Rear Overhang | 2040 mm |
| No. of Seats | 24/26 |
| Max. Width | 2200 mm |
| Passenger Door | 1 jack knife type |
| Overall Length | 6870 mm |
| Overall Height in Laden Condition | 2865 mm |
| Turning Circle Diameter | 12.3 m |
| Max. Speed | 94 kmph |
| GVW | 6520 kg |
| Electricals | Battery: 12 Volts, 120 Ah; Alternator Capacity: 65 Amps |



Starbus 40 CNG & Starbus Skool 40 CNG

| | |
|-----------------------------------|--|
| Chassis Platform | LP 909 / 49 BS IV CNG |
| Engine | Tata 3.8 SGI BS IV Engine; Water-cooled direct gas injection CNG engine; 3784 cc |
| Max. Power | 62 Kw (85 HP) @ 2500 rpm |
| Max. Torque | 270 Nm @ 1500-1800 rpm |
| Gearbox | GBS-27 synchromesh; 5 forward + 1 reverse |
| Clutch Diameter | 280 mm; single plate dry friction type |
| Suspension | Semi-elliptical leaf spring at front and rear; hydraulic double acting telescopic type at front and rear; anti-roll bar (front & rear) |
| Tyre Size | 8.25 x 16 -16 PR |
| Steering | Hydraulic power steering |
| Brakes | Dual circuit full air S-Cam brake |
| CNG Cylinder Capacity | 480 litres / 390 litres / 300 litres |
| Wheelbase | 4920 mm |
| Front Overhang | 1430 mm |
| Rear Overhang | 2952 mm |
| No. of Seats | 40 |
| Max. Width | 2200 mm |
| Passenger Door | 1 jack knife type |
| Overall Length | 9300 mm |
| Overall Height In Laden Condition | 2870 mm |
| Turning Circle Diameter | 17.5 m |
| Max. Speed | 84 kmph |
| GVW | 9400 kg |
| Electricals | Battery: 12 Volts, 150 Ah; Alternator Capacity: 65 Amps |



CNG Low Entry City Bus on LPO 1623

| | |
|-----------------------------------|--|
| Chassis Platform | LPO 1623 BS IV Rear Engine CNG |
| Engine | BG + 230 Cummins BS IV; Water-cooled, turbo-charged inter-cooled CNG Engine; in-built hydrodynamic retarder |
| Max. Power | 172 Kw (231 HP) at 2800 rpm |
| Max. Torque | 678 Nm at 1600 rpm |
| Gearbox | Allison's automatic transmission; T 270 R Deep Sump |
| Clutch Diameter | NA |
| Suspension | Pneumatic suspension at front & rear; hydraulic double acting telescopic type shock absorber at front and rear |
| Tyre Size | 11 R 22.5 Radial |
| Steering | Hydraulic power steering |
| Brakes | Dual circuit, full air S-CAM brake at rear, disc brake at front |
| No. of CNG Cylinders | 9 nos. of CNG cylinders, 80 litres water capacity |
| Wheelbase | 6300 mm |
| Front Overhang | 2490 mm |
| Rear Overhang | 3150 mm |
| No. of Seats | Standard - 35; customised options available |
| Max. Width | 2600 mm |
| Passenger Door | Inswing front door, outswing rear door |
| Overall Length | 12000 mm |
| Overall Height in Laden Condition | 3350 mm |
| Turning Circle Diameter | 20200 mm |
| Max. Speed | 72 kmph |
| GVW | 16000 kg |
| Electricals | 2 x 12 V, 150 Ah; Alternator Capacity 75 Amps |

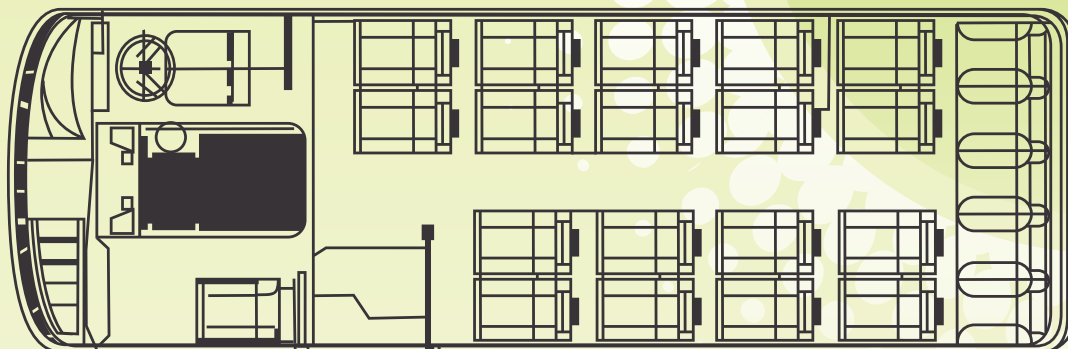


CNG City Bus on LPO 1613

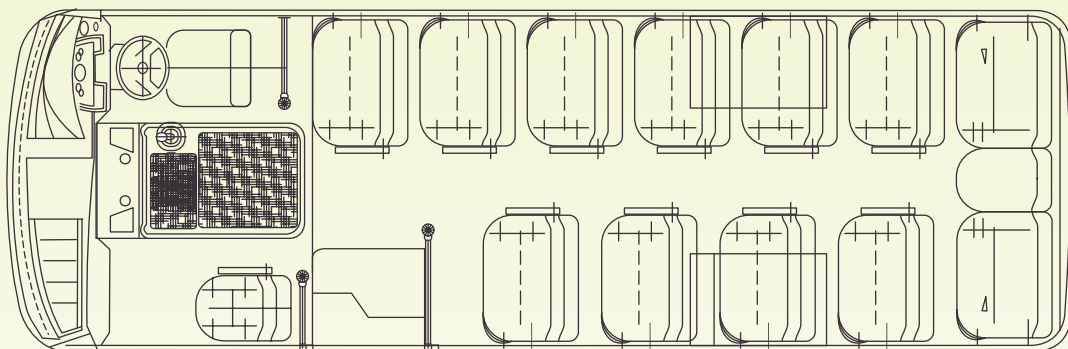
| | |
|-----------------------------------|--|
| Chassis Platform | LPO 1613 BS IV CNG |
| Engine | Tata 5.7 SGI Bharat Stage IV. Water-cooled, Stoichiometric, naturally-aspirated, CNG Engine |
| Max. Power | 96 Kw (130 HP) @ 2500 rpm |
| Max. Torque | 405 Nm at 1250-1500 rpm |
| Gearbox | G-40 synchromesh; 5 forward + 1 reverse |
| Clutch Diameter | 330 mm |
| Suspension | Front - Weveller semi elliptical leaf spring, Rear - leaf spring / pneumatic suspension; anti roll bar at front & rear |
| Tyre Size | 11 R 22.5 - 16 PR |
| Steering | Power-assisted hydraulic |
| Brakes | Dual circuit full air S-cam NGT brake system |
| CNG Cylinder Capacity | 5 cylinders - 650 L |
| Wheelbase | 5545 mm |
| Front Overhang | 2250 mm |
| Rear Overhang | 3325 mm |
| No. of Seats | Standard - 35; customised options available |
| Max. Width | 2434 mm |
| Passenger Door | Inswing front door, outswing rear door |
| Overall Length | 11120 mm |
| Overall Height In Laden Condition | 3350 mm |
| Turning Circle Diameter | 20400 mm |
| Max. Speed | 75 kmph |
| GVW | 16200 kg |
| Electricals | Battery: 12 Volts, 150 Ah; Alternator Capacity: 90 Amps |



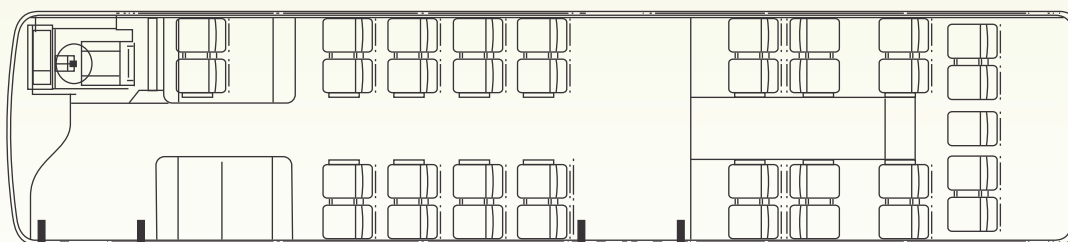
24-seater



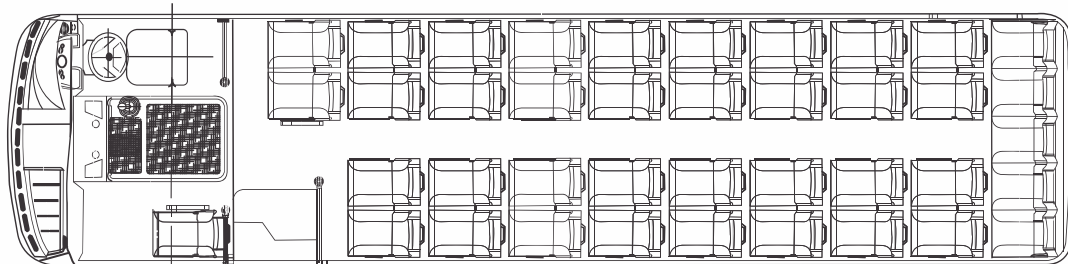
26-seater



35-seater



40-seater



Tata Bus Terminus

A single source for a range of services

Interaction with multiple vendors and agencies in building a bus and subsequent servicing of the body and chassis can often become a nightmare. Tata Motors, with its range of fully-built buses, offers a one-stop solution for bus buyers - the Tata Bus Terminus.

Services include:

- Easy Finance Schemes that facilitate hassle-free purchase
- Choice of a range of fully-built buses, along with spares and accessories, not only for the chassis but also for the complete bus
- The **Sampoorna Seva Package** provides maintenance facilities, including repair services, overall maintenance, genuine spares and breakdown services for the bus
- A Nationwide Service Network enables you to access our nearest service partners, Tata Motors channel partners or Tata Motors branches conveniently, wherever you are

Customer Care Helpline No. 1800-2097-979



TATA MOTORS

For more information, please visit our website: www.buses.tatamotors.com.

You can also contact our Sales Office: Tata Motors Limited, 20th Floor, Tower 2, One Indiabulls Centre, 841 Senapati Bapat Marg, Mumbai 400 013.

Tel.: +91 22 66586000, Fax: +91 22 66586010; Email: businfo@tatamotors.com

Alternatively, you may call our toll-free no. 1800-2097-979



**Enrol today! Call 1800 209 7979 or
email: delight@tatamotors.com or
visit www.tatadelight.com**

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