



# MAN presents solutions for the mobility of tomorrow

## Lion's Coach makes eye-catching debut

At Busworld Kortrijk, MAN and NEOPLAN exhibited state-of-the-art city buses, intercity buses and touring coaches – vehicles that will form the foundation for the mobility of tomorrow. The highlight at the stand was the new MAN Lion's Coach, which celebrated its official debut at the fair. From market introduction, the touring coach will be available in three lengths: 12,101 mm, 13,361 mm and 13,901 mm on two or three axles. At the end of 2017, a fourth length will be added in the form of a 13 m dual-axle vehicle (13,091 mm). Its six additional seats compared to the 12 m version make this vehicle a particularly attractive option from an economical point of view. Its maxi-

mum overall permitted weight of up to 19.5 tonnes also contributes to its flexibility in terms of possible uses. The optional wheelchair lift plays an important role in achieving ideal axle load distribution as, in this version, it sits over the front axle, thus relieving the rear axle while also not restricting the luggage compartment. The standard version measures 3870 mm in height.

Excluding the toilet, the new MAN Lion's Coach models, which have been awarded three stars on the German coach seating system, have space for a maximum of 53, 57, 59 or 63 passengers. The luggage compartments have a volume of between of 11.7 and 14.3 m<sup>3</sup> depending on the model.

Modern yet timeless, the new MAN Lion's Coach marks the launch of a new, distinctive MAN design language at the front, rear and sides. The designers focused on clearly separating the functional areas of the driver's cockpit and passenger compartment, the luggage compartment and the drive unit. In addition to appearance, this segmenting also provides benefits in terms of ease of maintenance and therefore economy as damaged parts can be exchanged quickly and without incurring large costs. New materials and manufacturing processes make the bus lighter and more robust, and also further increase ease of use, for example, when opening and closing the luggage compartment lid or bonnet.

The new headlights are an immediate eye-catcher. And, for the first time, like the standard LED rear lights, they



can be installed as all LED. LED dipped and main beam lights are around 50% brighter than halogens. Also, LED light is more diffuse, and, at the same time, has a much greater range as well as a significantly longer service life. A particularly distinctive feature of the new headlight is the strip-form brand-specific daytime running light, which also functions as an indicator.

### Optimum balance between efficiency and comfort

A glance under the bonnet indicates that the new MAN Lion's Coach is as economical as ever. With its optimised Euro 6 driveline, it also enjoys benefits, including an extended axle ratio  $i=2.73$  and an increased power output (up by 20 hp and 200 Nm). The new secondary retarder provides optimum braking effect in conjunction with the high axle ratios. It achieves higher maximum torque of 4000 Nm instead of 3200 Nm as well as a power level of 500 kW, representing an increase of 80 kW. This provides greater reserves even during heavy braking, thus increasing safety.

As part of the MAN BrakeMatic electronic brake system, the new MAN Lion's Coach and the other MAN and NEOPLAN touring and intercity buses will also feature the more powerful EVBeC engine brake.

Electronic regulation of the exhaust gas back pressure enables increased braking effect over the entire operating speed range, thus achieving a high degree of brake output even at low speeds.

The MAN TipMatic gearbox, installed as standard in models of 460 hp (337 kW) and higher, employs a new moving-off and gear-shift strategy, optimally matched to the D26 engines. In addition, several new features are included: the new SmartShift-ing gearbox function plays a key role when it comes to finding the optimum balance between efficiency and comfort when shifting gears. It combines a new, fast-shifting procedure in all gears with upshift assistance and shifting adapted to the actual driving situation.

For demanding performance on a challenging terrain or with heavy loads, the new D26 provides optimised moving-off capabilities. The torque, which has been increased by 200 Nm, also contributes to excellent moving-off behaviour. Overall, the engine, which has had a power increase of 20 hp, provides superior driving performance across a wide engine speed range. Idle Speed Driving enables comfortable driving at idling speed without touching the accelerator. With this new feature, the bus/coach "glides" effortlessly through slow-moving traffic with the clutch engaged. While manual upshifting is possible from the first through to the sixth gear, downshifting is performed



automatically when the idling torque is insufficient for a higher gear or when the driver brakes.

In addition, a wide range of assistance systems is available, such as the topography-based MAN EfficientCruise cruise control with the EfficientRoll coasting function, Adaptive Cruise Control (ACC), Lane Guard System (LGS) and MAN Attention Guard. A new generation of shock absorbers and an optimised vehicle configuration deliver enhanced driving comfort, improved handling and higher safety reserves. The assistance systems not only provide additional comfort and safety while travelling. They also make a significant contribution to efficiency, as do the aerodynamics, which are 20% better than the previous model.

For example, the EfficientRoll coasting function provides an increase in efficiency on even gentle slopes, by automatically moving the gear to the neutral "N" position and allowing the bus to move with as little friction loss in the driveline as possible. The previous EfficientCruise generation produced a fuel saving of up to 6 per cent and the new features are linked to a further increase in fuel efficiency.

The other products displayed at the MAN pavilion were the MAN Lion's Intercity, MAN Lion's City Hybrid, NEOPLAN Skyliner and NEOPLAN Tourliner, all of which were massive crowd-pullers at the event.