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your bus



# PRESS KIT

Busworld 2011

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## **WISEON at Busworld 2011: Innovations and Premieres**

- **New 12 metre high-decker coach VISEON C12HD**
- **New coach VISEON C11**
- **Coach midibus VISEON C10 now with 400 HP**
- **Regional double-decker LDD14 gets new cockpit**

**Pilsting/Kortrijk.** Once again VISEON Bus GmbH will ignite a firework of innovations and premieres at an international fair. Only three years after the founding of the young company, the bus and coach manufacturer from Pilsting in Lower Bavaria is expanding its coach C-series again and is presenting its new premium midibus coach VISEON C12HD to the public for the first time at the leading European bus trade fair in Kortrijk, Belgium from 21<sup>st</sup> – 26<sup>th</sup> October 2011. In addition, VISEON C12HD, an 11.38 metre long coach, planned for June 2011, is a particularly versatile vehicle with up to 45 seats. Furthermore, VISEON is introducing the premium midibus VISEON C10 in a new version with a 400 HP (294 kW) MAN engine and ZF chassis. With the public transit vehicles the innovative bus manufacturer has also come up with new developments. The low floor double-decker VISEON LDD14, introduced a year ago, will be equipped with a newly- created driver work station.

### **World premiere: VISEON C12HD**

At Busworld 2011, it is “curtain up” for the new premium high-decker coach VISEON C12HD. The two-axle with the classic

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coach length of exactly 12.0 metres, makes over 22 cm more overall height available and offers not only more standing room in the central aisle, but also more head room in the rows of seats and the possibility for individual passenger seat layouts. This is due to the fact that the VISEON C12HD is the first VISEON coach with an even floor throughout. The noticeably higher windows let more light into the passenger area and, at the same time, give them an even better view. Moreover, the latest model from VISEON has come up trumps with an almost ten m<sup>3</sup> large luggage compartment and a particularly dynamic-feeling layout of the side lines. Luggage flaps with a new parallel swing mechanism complete the round of innovations in the new C12HD.

#### **VISEON C11: More versatile coach with up to 45 seats**

With the VISEON C11, the bus and coach manufacturer is introducing a versatile premium coach with a length of 11.38 metres. The two-axle coach offers four-star space for up to 40 passengers, the maximum capacity amounts to 45 seats. With the short wheelbase of only 5.430 millimetres, the VISEON C11 has the greatest versatility and is, therefore, excellently suited to town routes as well as for trips in the mountain regions where there are a lot of curves. The C11 is also distinguished by its futuristic design, driving safety and a sophisticated standard arrangement. It offers the passengers travel comfort, is particularly easy to handle for the driver and offers the operator the most cost-effective operation. Like all other VISEON coaches, the C11 also enables "Open Space", a dome-shaped elevation in the rear with generously dimensioned panoramic windows. They ensure sufficient head-room and generous

standing room in the rear central aisle and in the slightly raised area over the engine.

### **WISEON C10: Now with 400 HP motor**

With immediate effect, VISEON is equipping the C10 with a 400 HP (294 kW) MAN engine as standard. The 10.5 litre six-cylinder of the type MAN D2066 LOH 28 is installed lengthwise and upright in the rear. The maximum torque of 1900 Nm lies flat above a large speed counter area of 1000 min<sup>-1</sup> up to 1400 min<sup>-1</sup> and ensures a powerful yet cost-effective drive system – even with a full overhang and in the mountains. Thanks to cooled exhaust gas recirculation and closed particle filters, the MAN engine meets the EEV emissions standard and that without additional supplies. Moreover, on request it is also possible to obtain the 6.9 litre six-cylinder MAN D 0836 LOH with a performance of 290 HP (213 kW). The chassis of the premium midi-bus C10 has also been revised by VISEON. So the 10.4 metre long coach now rolls like the models C11 and C13 on modern and tried and tested ZF axles of the latest generation. The stability programme ESP has been installed as standard and includes cruise control and a top speed limiter.

### **WISEON C-Series: Extra tank as upgrade**

For the coach models C11, C12HD and C13, VISEON provides the possibility to upgrade to a 220 litre extra fuel tank. A new second maintenance lid in the central aisle above the front axle has been so dimensioned to not only enable access to the level indicator, but also to enable the retrospective installation of the extra tank. Up to now, customers have already been able to order the extra tank for their new vehicles. The coaches C11,

C12 and C13 are equipped with a 320 liter fuel tank as standard.

#### **WISEON LDD14: New driver workstation**

The low floor public transit double-decker VISEON LDD12 will contain a new driver workstation from the model year 2012. As has been the case up to now, the height and the gradient of the instrument holders and the steering wheel are adjustable and, together with the tidy arrangement of the few service elements, this makes the work easier for the driver in scheduled service. A considerably innovative element is the new module-combination instrument in VISEON design. The large display instrument Tacho and the rev counter frame the central display. Small analogue displays signal to the driver at a glance the level of the fuel tank and the temperature. The central display was optimized in its functions for VISEON's own electronic architecture V-CAN<sup>®</sup> and shows the driver all the important information at the touch of a button or, in the case of disorder, immediately. The new central display makes a colour presentation of the information possible for the first time, so that disorder, maintenance and warning indicators can now be even better and more easily identified and differentiated from each other. The new VISEON instrument panel will also be used in all C-series coaches from 2012 on.

## **Premiere at Busworld 2011: The new premium high-decker VISEON C12HD**

- **12 meter long coach with a height of 3.78 m**
- **Even floor enables different passenger seat layouts**
- **Spacious luggage compartment**
- **Design highlights the dynamic lines**
- **Now available with LED headlights**

**Pilsting/Kortrijk.** The VISEON Bus GmbH is making their coach programme complete and presenting the new premium high-decker coach VISEON C12HD for the first time at the Busworld 2011 in Kortrijk Belgium from 21<sup>st</sup>- 26<sup>th</sup> October 2011. The two-axle, with the classic coach length of exactly 12.0 metres, has over 22 centimetres more overall height than the other vehicles in the VISEON-C series and, with 3.78 metres overall height, offers not only more standing room in the centre aisle, but also more headroom in the rows of seats and the possibility for individual seating concepts. This is due to the fact that the VISEON C12HD is the first VISEON coach which has an even floor throughout. As with the other VISEON models, the VISEON C12HD also captivates with its sophisticated design, modern and proven technology and a wide range of pragmatic solutions, such as the "Open Space", a dome-shaped elevation in the rear roof area, LED lighting technology throughout, both inside and outside and a shapely and pragmatic cockpit.

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### **More space, more light, more visibility, more possibilities**

Like all the other VISEON coaches, the new VISEON C12HD has its origins in the VISEON modular construction system, which enables different lengths with less additional modules to be constituted and, as a result, the new premium coach has a classic length measurement of exactly twelve metres through an overhang which is 40 millimetres longer at 2690 millimetres and a wheelbase of 6010 millimetres. Yet, also in the overall height, the modular system offers possibilities for variation, as the VISEON C12HD in its new format has 3.78 metre overall height. 22 cm more height also means more travel comfort, since the additional height entirely benefits the passenger area. Up to the window rail, the self-supporting body work is consistent with the well-known C10, C11 and C13 dimensions. In addition, larger window surfaces and a spacious expansion of the passenger area enable new possibilities: firstly, with the C12HD, VISEON is providing a coach with even floor throughout. Apart from the mounting rails installed for the standard two-plus-two seating, the VISEON engineers had already envisaged attachment points for different seating layouts in the framework— ideal conditions for the realization of VIP bus concepts with luxurious three-plus-one seating, rear lounge, conference bus upgrade and many more individual wishes. Thanks to the typical VISEON draft-free ventilation without air-vents, the passengers feel comfortable in all versions of the coach. Equipped in three-star standard the VISEON C12HD offers space for up to 49 passengers whilst 44 seats are available in the four-star version.

Despite the even floor, the passengers in the VISEON C12HD also benefit from a generous standing room of at least 2.00 metres along the overall length. The height of the luggage racks has been raised which gives the passenger more headroom in the seating area. The typical VISEON light dome in the rear, known as “Open Space”, is, of course,

also found in the new high-decker and enables a light and friendly atmosphere in the area above the motor with additional headroom. However, the remaining passenger space also has a light and friendly appearance— the 220 millimeter higher windows let even more light in and, at the same time, allow an even wider range of views of the landscape, mountains and buildings.

### **Dynamic design**

Not only inside, but also outside, one can see the effects of the new upright format of the VISEON C12HD. The new premium coach captivates with its shapely proportions and through a friendly face with a pleasant high-vaulted front windscreen above the characteristic fairing with the headlights arranged in a V-shape. Laterally, the window surfaces, which have been extended upward, also required slight adaptations to the design. Modelled on the side layout of the low floor double-decker VISEON LDD 14, the typical VISEON V-swing arm on the B-column has now advanced slightly upward and, at the same time, is additionally emphasized through a dark window line which has been set at a 30 degree angle facing upwards. In this way, the vehicle receives its pronounced dynamic line, which is visibly reinforced to a large extent by the modern claims of the new VISEON buses. An additional advantage: passengers in the front rows always have an unobstructed view to the side. The athletic rear with the distinguishing LED lighting completes the design of the new VISEON C12HD and ensures that the line is also recognizable and unmistakable from behind.

### **Large luggage compartment with new parallel swinging flaps**

Although the passengers benefit most from the new height, the VISEON C12HD also makes an extremely spacious luggage compartment available. With up to 9.9 m<sup>3</sup> of luggage space even with built-in central toilet, it represents the absolute top drawer of the classic twelve metre

class-- not only bus and coach operators, but also drivers and passenger fully appreciate this. For the first time VISEON is presenting the C12HD at Busworld 2011 with new flaps for the luggage compartment, which from the model year 2012 will be available for all VISEON coaches on request. With the help of a specially calculated erecting kinematics, the engineers have managed to drive the flaps upwards completely parallel. In addition, the flaps swing out completely over the clear area when opened. In this way, the driver can put the luggage compartment to optimum use, filling it up to the top and without bending over.

### **Environmentally-friendly drive, comfortable chassis**

The VISEON C12HD is available with two different types of motorization. In the series, a 10.5 litre six-cylinder MAN D 2066 LOH 28 (EEV) inline engine with 400 HP (294 kW) in the rear ensures an environmentally-friendly, yet powerful drive. This engine provides a torque of 1,900 Nm at 1,000 - 1,400 min<sup>-1</sup>. Customers of VISEON also have the option of ordering a 12.4 litre six-cylinder MAN D 2676 LOH 26 (EEV) with 440 HP (324 kW) performance and a maximum torque of 2,100 Nm at 950 - 1,400 min<sup>-1</sup>. Thanks to modern common-rail technology, a cooled exhaust gas recirculation and an electronically controlled filter, both power trains even in the offered EEV version run without using additional operating fluids.

VISEON is also offering two alternatives transmissions. Whilst in the 400-hp version the standard offering is a manual, ZF 6 S 1901, six-speed gear box to transfer the engine power to the drive axle, the larger engine is equipped with the power-shift 12-gear ZF AS-Tronic transmission. This is also available as an option for the 400 HP engine.

For the chassis of the C12HD, VISEON has employed the tried and tested ZF technology. At the front, independent suspension of the type

ZF R75E ensures driving comfort and safety of the highest level. At the rear, the drive axle ZF A132 is at work. The stability program ESP in a new proactive version is also installed as standard as are cruise control, Bremsomat brake control and a top speed limiter.

### **Headlights now also available in LED Technology**

From model year 2012 all VISEON coaches can be equipped upon request with headlights featuring LED technology. Three power LEDs help to create a very good illumination with white light, which is also less tiring for the driver's eyes. Other advantages of LED technology include reduced power consumption and extremely long life of the bulbs, which are also resistant to vibrations. Already as standard the daytime driving lights, all rear lights, blinkers, brake and marker lights as well as all interior lights on the new VISEON C12HD, are equipped with durable, fail-safe and energy-saving LED technology. VISEON provides the option of main and high beam lamps with especially bright and wide illumination bi-xenon lamps. An adaptive cornering light, which switches on the right or left fog lamp as required, already belongs to the basic equipment of the VISEON C12HD.

## Technical Data VISEON C12 HD

### Dimensions and weights

Lenght	12 000 mm
Width	2550 mm
Hight	3780 mm
Standing headroom (even floor)	min. 2000 mm
Boarding height (front/rear)	350/350 mm
Wheel base	6010 mm
Floor height (even floor)	1500 mm
Overhang (front/rear)	2690/3300 mm
Min. theoretical turning circle	21000 mm
Perm. gross weight	18 000 kg
Tech. permissible gross weight front axle / rear axle	7100 / 13000 kg
Luggage compartment middle entry version	9,9 m <sup>3</sup>
Fuel tank capacity	320 L
Optional additional tank	220 L

Passenger seats (central door)	3-star seating up to 49 + 1 + 1
	4-star seating up to 44 + 1 + 1
	5-star seating up to 40 + 1 + 1

### Engine

Water-cooled six cylinder in-line diesel engine (MAN D2066 LOH), installed vertically, with turbo charging and charge air cooling, electronically controlled direct fuel injection with Common Rail System, cooled exhaust gas recirculation, closed particle filter, EEV exhaust emission standard.

Bore/stroke	120/155 mm
Displacement	10,518 cm <sup>3</sup>
Compression ratio	17:1
Engine power	294 kW (400 PS) at 1900/min
Maximum torque	1900 Nm at 1000–1400/min

**Optional:**

Water-cooled six cylinder in-line diesel engine (MAN D2676 LOH), installed vertically, with turbo charging and charge air cooling, electronically-controlled direct fuel injection with Common Rail System, cooled exhaust gas recirculation, closed particle filter, EEV exhaust emission standard.

Bore/stroke	126/166 mm
Displacement	12,419 cm <sup>3</sup>
Compression ratio	17:1
Engine power	324 kW (440 PS) at 1900/min
Maximum torque	2100 Nm at 1000–1400/min

**Power train:**

**Transmission (with D2066 LOH):** synchronised 6-speed manual gearbox ZF 6 S 1901 with integrated retarder, manual operations via pneumatically-assisted cable-controlled gearshift.

**Transmission ratios:** 6,32 – 0,81

**Optional transmission or with D2676 LOH:** automated 12-speed gearbox ZF 12 AS-Tronic 2301 BO with integrated retarder. Operated via ZF driving switch (joystick).

**Transmission ratios:** 12,33 – 0,78

**Chassis**

Independent wheel suspension at the front ZF RL 75 E, trapezoid multi-link axle, two pneumatic spring bellows, two shock absorbers, stabilizer, technical permissible axle load 7.1 t.

Rigid drive axle ZFA132 at rear, two trailing arms, overhead triangular trailing arms, four air spring bellows, four shock absorbers, optional stabilizer, technical permissible axle load 13 t. Tyres 295/80 R 22.5.

Axle drive ratio  $i = 3.54$  as standard

Optional in connection with ZF AS-Tronic  $i = 3.23$

### **Braking system**

Electronically-controlled dual-circuit brake installation with all-round ventilated disc brakes, ZF Intarder permanent brake, operated via the steering lever connected upstream of the foot brake, retarder brake limiter, ABS and ASR, brake assistant, ESP Electronic Stability Program (WABCO-ESC).

### **Steering**

ZF ball-and-nut-type power steering gear Type 8098 Servocom with variable transmission ratio (17.1 – 20.1), direct transmission ratio with approx. 2.4 turns of the steering wheel, hydraulic torque at 170 bar 6,478 - 7,621 Nm, steering column pneumatically adjustable in both height and tilt.

### **Elektrik**

Voltage 24V, 2 three-phase generators à 28,5 V / 120 A,  
two batteries 12 V / 225 Ah..

### **Front lighting**

Halogen headlights for dipped and full beam as standard, optional bi-xenon lamps for dipped and full beam (including headlight cleaning system), daytime lamps, indicator and marker lights (on roof) in long-life LED technology, fog lamps with cornering lights.

### **Rear lighting**

Tail lights, brake lights, indicators, reversing lights and rear fog lamps in LED technology, multi-compartment tail lamps (tail-indicator-brake lamps) at top also with LED technology.

### **Miscellaneous**

LED licence plate lighting, side marker lights and 1 indicator light on the left and right side of the vehicle respectively in long-life LED technology, lighting for luggage compartments also with LED technology.

### Heating/ventilation/air-conditioning

Fully-automatic heating and ventilation system with roof-mounted air-conditioning system. Draught-free room ventilation, air intake via slits in roof channel in the direction of the windows and centre aisle. Electrically-operated skylight. Ventilation via the luggage compartment. Webasto auxiliary heating, 35W; maintenance-free convector heating system in passenger area, additional heater at the front 15 kW, cooling capacity 6 kW.

### Roof-fitted air-conditioning system:

Air-conditioning \*\*\*

Cooling capacity:	32 kW
Heating power:	38 kW
Ventilation performance:	6,450 m <sup>3</sup> /h

### Optional

Air-conditioning \*\*\*\* (Hot zone)

Cooling capacity:	39 kW
Heating power:	32 kW
Ventilation performance:	8,600 m <sup>3</sup> /h

Air-conditioning \*\*\*\*\* (Tropic)

Cooling capacity:	44 kW
Heating power:	without
Ventilation performance:	8,600 m <sup>3</sup> /h



C12HD\_#01



C12HD\_#03



C12HD\_#04



C12HD\_#06



C12HD\_#07



C12HD\_#08



C12HD\_#09



C12HD\_#10



C12HD\_#11



C12HD\_#13



C12HD\_#14



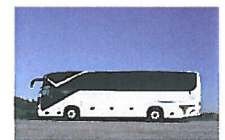
C12HD\_#15



C12HD\_#16



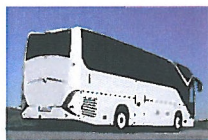
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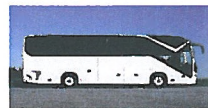
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C12HD\_#19



C12HD\_#20



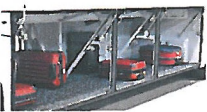
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C12HD\_#22



C12HD\_#23



C12HD\_baggage\_co...



C12HD\_baggage\_fla...



C12HD\_baggage\_fla...



C12HD\_dashboard



C12HD\_engine\_01



C12HD\_entrance\_front



C12HD\_ESP



C12HD\_even floor



C12HD\_headlights



C12HD\_instruments



C12HD\_interior\_01



C12HD\_LED\_headlight



C12HD\_mirror\_01



C12HD\_Mirror\_2



C12HD\_Rearlights



C12HD seats



C12HD side design



C12HD Sign 02



C12HD steps to aisle



C12HD wheel 02



VISeon\_C10\_01



VISeon\_C10\_03



VISeon\_C10\_06



VISeon\_C10\_08



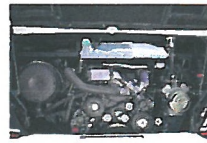
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VISeon\_C11\_03



VISeon\_C11\_05



VISeon\_C11\_15



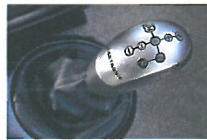
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VISeon\_C11\_20



VISeon\_C11\_21



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VISeon\_C11\_24



VISeon\_C11\_25



VISeon\_C13\_02



VISeon\_C13\_03



VISeon\_C13\_05



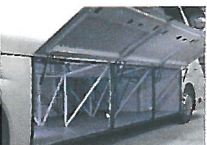
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VISeon\_C13\_19



VISeon\_C13\_23



VISeon\_C13\_24



VISeon\_C13\_34



VISeon\_LDD14\_03



VISeon\_LDD14\_07 ...



VISeon\_LDD14\_08 ...



VISeon\_LDD14\_10



VISeon\_LDD14\_17



VISeon\_LDD14\_19



VISeon\_LDD14\_21



VISeon\_LDD14\_24



VISeon\_LDD14\_26



VISeon\_LDD14\_29



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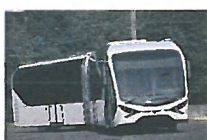
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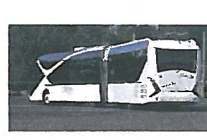
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VISeon\_LT20\_06



VISeon\_LT20\_15



VISeon\_LT20\_19



VISeon\_LT20\_28



VISeon\_LT20\_33