



CROBUS

Class of its own.





ZUBAK GROUP

A 35-year tradition

In 2007, ZUBAK Group established a company AZ CROBUS thus marking the beginning of creation of a new conceptual and development basis for further operation and a huge potential in terms of its economic and regional opportunities. In this context, the project of the manufacture of a **high class multipurpose bus designed by the Croatian engineering intelligence** was launched, strongly supported from the very beginning by SCANIA, a renowned Swedish company and a partner of AZ CROBUS. The project has immediately gained global reputation.

Idea – Knowledge and Production Promoter

The idea of motor vehicle manufacture dates back to the very establishment of the company AutoZubak. As early as in 1978, Mr. Pavo Zubak, current President of the Board of AZ CROBUS, opened the **first motor-car repair shop** in Sesvetski Kraljevec which soon became an authorised Volkswagen service centre. This was followed by a decade of **investments in car sales and service centre network** until 1999, when ZUBAK Group became an **autho-**

rised distributor of VW, Audi, Škoda and Seat cars on the Croatian market.

More recently, in spite of the recession and increasingly difficult economic situation of the car industry worldwide, **ZUBAK Group continued to successfully develop new and improve the existing business projects.** Today, ZUBAK Group includes the company AutoZubak with its 14 sales and service centres for VW concern cars, ORYX Group including the following units: Assistance Service, Rent-a-Car Service, Driving School, Safe Drive Centre, Insurance and Technical Car Inspection Centre, as well as AZ CROBUS and Auto-Zubak Zagreb with a high category business and tourist complex Veladrion.

Affirmation of Tradition and Vision

ZUBAK Group holds some highly appreciated certificates: ISO 9001 (since 2006), Superbrands (since 2009) and Croatian Origin Certificate for the Fleet Management Project (2011).

It has a 35-year operating tradition with an equity exceeding EUR 50 million and more than 1000 employees.



HYSTORY

From Raketa (Rocket) to Zora (Dawn)

The bus manufacture in Croatia dates back to nineteen-thirties with 1958 marking a great turning point when the model „Raketa“ was launched on the market by the factory Autokaroserija Zagreb. Twenty years later, the company changed its name to TAZ – Tvornica autobusa Zagreb (Zagreb Bus Factory) and, in cooperation with a renowned chassis manufacturer FAP launched another great flagship „Dubrava 14“.

Based on previous success, in early 1990s Eurobus continued its bus designing and manufacturing operations. Following a long lasting and thorough preparation works, several new bus models were presented – suburban bus (AV120 L), tourist bus (AV 120), tourist double decker (AV 120 D), low-floor minibus, airport bus (APRON).

The company Eurobus ceased its operations in 2001 and this was the end of bus manufacturing in the Republic of Croatia.

ZORA Bus – Experience and Technology for the Modern Era

A few years later, dawn broke in the previously terminated bus manufacturing industry. A new vision of a bus for the modern era was presented to the market, launched by the CROBUS trademark with its new model ZORA (Croatian term for “dawn”), a successful combination of traditional bus manufacturing and modern technology.

ZORA is a high class intercity bus constructed on the proven SCANIA chassis, ensuring top quality service to all users. It was basically designed for regular service for medium distance lines; however, due to its specific dimensions and technical solutions, CROBUS ZORA is capable of meeting, in a cost-efficient manner, much greater requirements than the mere passenger transport.





CROBUS ZORA

Class of its own

When designing the CROBUS ZORA, particular attention was paid to the quality and comfort of the passenger cabin in order to provide a **warm and comfortable atmosphere** to the passengers during the travel. Thoughtful approach to each detail of the interior design has made this bus **easy and safe** to travel with while conveniently designed wide tread steps and suitably positioned handrails allow **easy getting on and off** the bus.

Technical details of the ZORA bus

The length of the bus CROBUS ZORA exceeds the one of conventional 12-m x two axle buses **thus extending the passenger cabin by more than 300 mm**. This means sufficient room for passenger legs in a conventional configuration with 51 passenger seats with longitudinal distance of 750-770 mm between the seats. It is by this particular characteristic that CROBUS ZORA is distinguished from its competitors and has rightly been given the attribute "**Class of its own**".

The seats feature **ergonomic design** with adjustable backrest angle. They also have folding armrests and, for more comfortable seating, the centrally positioned seats can be shifted laterally whereby a **more comfortable space for passengers** is created without affecting the width of the central passage.

Multi-sets above the passenger seat offer the possibility of **individual setting** of ventilation, lighting and sound volume while an integrated audio-visual system makes the travel extraordinary pleasant.

In addition to main lighting with a two-level control system, there are also blue night lights with a minimum reflection in the windscreen as well as convenient floor lighting.

The **heating, air conditioning and ventilation systems** make the travel still more comfortable, both for the passengers and the crew.



PRIMARY VALUE

Cost efficiency

The body frame is made of top quality high strength steel, externally coated with light weight anti-corrosion artificial materials.

The body has been designed by using advance software developed for modern bus manufacturing technology and the bus safety has been checked by roll-over test (E7 66R-011137).

CROBUS ZORA holds the EC Whole Vehicle Type Approval (WVTA) Certificate.

Driving efficiency

High quality Scania chassis (chassis with driving assembly) ensures high performance and cost efficient drive under different road conditions, from local and trunk roads to highways.

For better efficiency, CROBUS ZORA has in every aspect been designed as a vehicle intended for a variety of uses and, among other functionalities, it includes the possibility of lifting and kneeling at lower rotation speeds in specific areas containing obstructions.

The drive assemblies are compliant with the latest EU standards (depending on the market of their use).

Steering

It is possible to choose between two gear changing modes - subject to users preferences and needs, the vehicle is supplied either with automatic or manual gearbox with a possibility to switch to manual transmission while the automatic mode is on. The gearbox also includes a powerful hydrodynamic retarder.

Subject to carefully selected automatic gearbox and differential transmission, the engine of this vehicle is the best and the most cost-efficient choice for regional and trunk roads.

Tanks

Excellent autonomy of the vehicle is due to low fuel consumption combined with large fuel tank capacity.

Covers of all lateral luggage compartments have a conventional opening option while the covers of main luggage compartments between the front and rear axles come with either parallelogram opening or centralised locking.





COMFORTABLE DRIVE

A prerequisite for safe driving

The bus driver's cabin is designed in compliance with ergonomic standards, including clear visibility of the road when travelling long distances, accurate visual perception of the instrument panel and a **comfortable driver's seat**.

Driver's comfort is the top priority

Comfortable position and **multifunctional driver's seat** grant to the drivers a wide range of possible adjustments of the steering wheel height and angle.

Visibility during the drive is additionally improved by **large rear-view mirrors with the components set to eliminate blind spots**, electric adjustment and heating of the driver's cabin.

Besides, **rear camera displays the rear door** and the area behind the vehicle when driving in reverse gear. An extra advantage is **heatable side window** of the driver's cabin for improved **safety and visibility**.

Co-driver seat

Co-driver folding seat grants **unobstructed access from the front door**. It is furnished with a three-point **safety belt** and folding **armrests**. With sufficiently spacious legroom, at the bottom of the front wall a special footrest structure has been provided.



GOING FORWARD

Continuing sustainable growth

From its global launch in Kortrijk (Belgium) in 2011 up to the present day, CROBUS ZORA has been **changing and developing subject to market requirements** and purchaser needs, which resulted in its continuing and sustainable development.

In view of frequent changes of the legislation governing the road transport and passenger safety, our manufacture has been brought in line with the **new standards and regulations of the European Union with a view to increasing bus travel quality and safety.**

The results of adjusting the manufacturing capacities to the new standards:

- > New and improved dashboard
- > Flat floor and increased luggage compartment
- > Possibility of wheelchair lift installation
- > Possibility of line display installation
- > Possibility of toilet installation
- > Possibility of kitchen and refrigerator installation

> Possibility of audio-visual equipment installation.

Take a road trip with us

Our customers and their desires will continue to be an inexhaustible source of ZORA bus model development and a basis for future quality manufacturing in accordance with the strictest safety standards, inherent in the modern technological production.

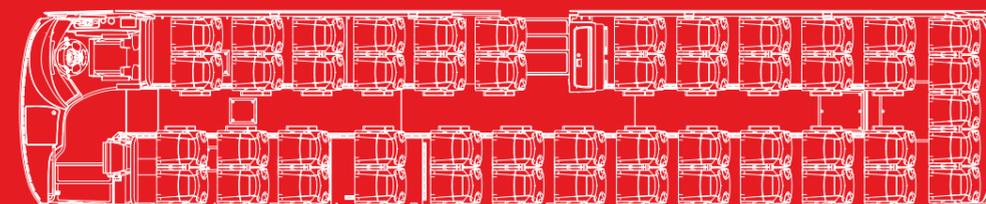
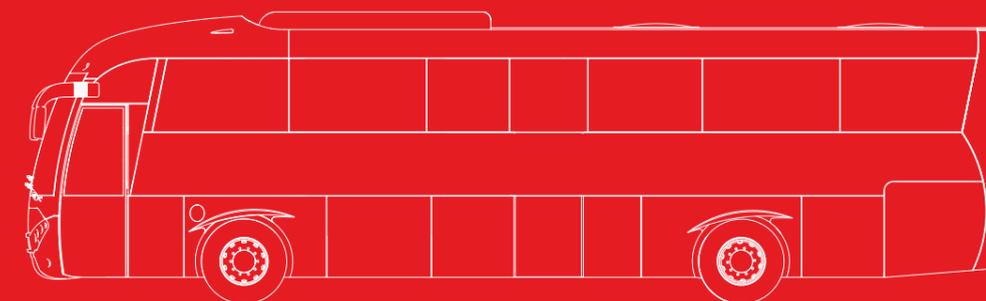
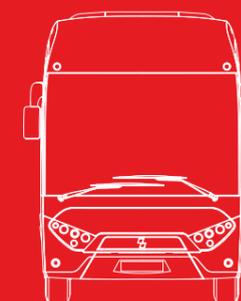
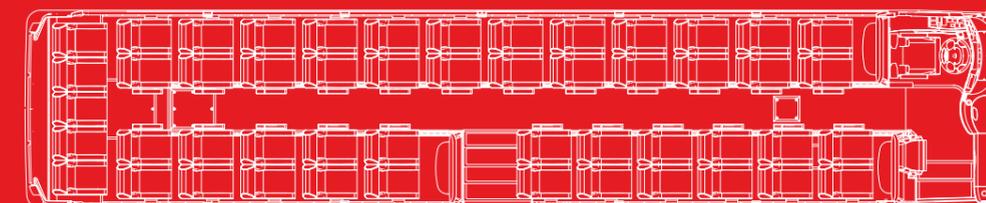
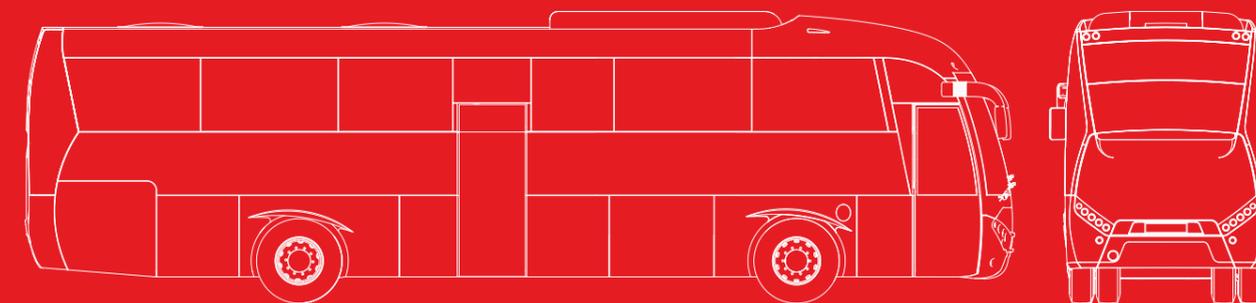
Also, your safe and pleasant travel suggests that we have paved a way for integrated and well planned future development and our intelligent production technology has contributed to the society taking due care of the local community and environment.

Have a nice trip!



Technical details

Model	ZORA LHD / RHD - Euro 6 / 5 / 4 / 3	
Type	121	122
Dimensions		
Overall length	12350 mm	
Overall width	2550 mm	
Total height unloaded vehicle	3612 mm (with A/C)	
Height from floor to ceiling	Front 1940 mm (flat floor) / 2158 (corridor) / Rear 1797 mm	
Wheelbase	6150 mm	
Front overhang / approach angle	2700 mm / 6,40°	
Rear overhang / approach angle	3500 mm / 7,20°	
Passenger door (number of door / width)	2 / 620 / 650	
Step height	front 368 mm / rear 375 mm	
Floor – height above ground	1145 mm (corridor) / 1378 mm (flat floor) / 1378 mm (platform)	
Distance between seats	750 / 770 mm	





Model		ZORA LHD / RHD - Euro 6 / 5 / 4 / 3	
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Type	121	122
Number of Seats	51+1+1 / 49+1+1	
Luggage space volume	6,5 m ³ (corridor) / 5,3 m ³ (corridor + WC)	7,1 m ³ (corridor) / 5,9 m ³ (corridor + WC)
	7,4 m ³ (flat floor) / 6,2 m ³ (flat floor + WC)	8 m ³ (flat floor) / 6,8 m ³ (flat floor + WC)

Chassis	SCANIA	
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Engine		
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Emission	EURO 3 / 4 / 5 / 6	
Power	EURO 3 - 310/360/410 HP // EURO 4 - 310/360/400 HP EURO 5 - 310/360/400 HP // EURO 6 - 320/360/410 HP	
Number of cylinders	5 - 6 in line	
Working displacement	9 - 13 litre	
Effective power	310 - 410 HP at 1900 rpm	

Gearbox		
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Type and model	SCANIA GR875R, Opticruise	
Gear change	Automatic	
Number of gears	8	

Front axle		
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Type	AMI860	AMI700
Suspension	Rigid - 2 air springs	Independed - 2 air springs
Permitted load	7100 kg	
Brakes	Disk / Drum	
Control system	ECAS	

Rear axle		
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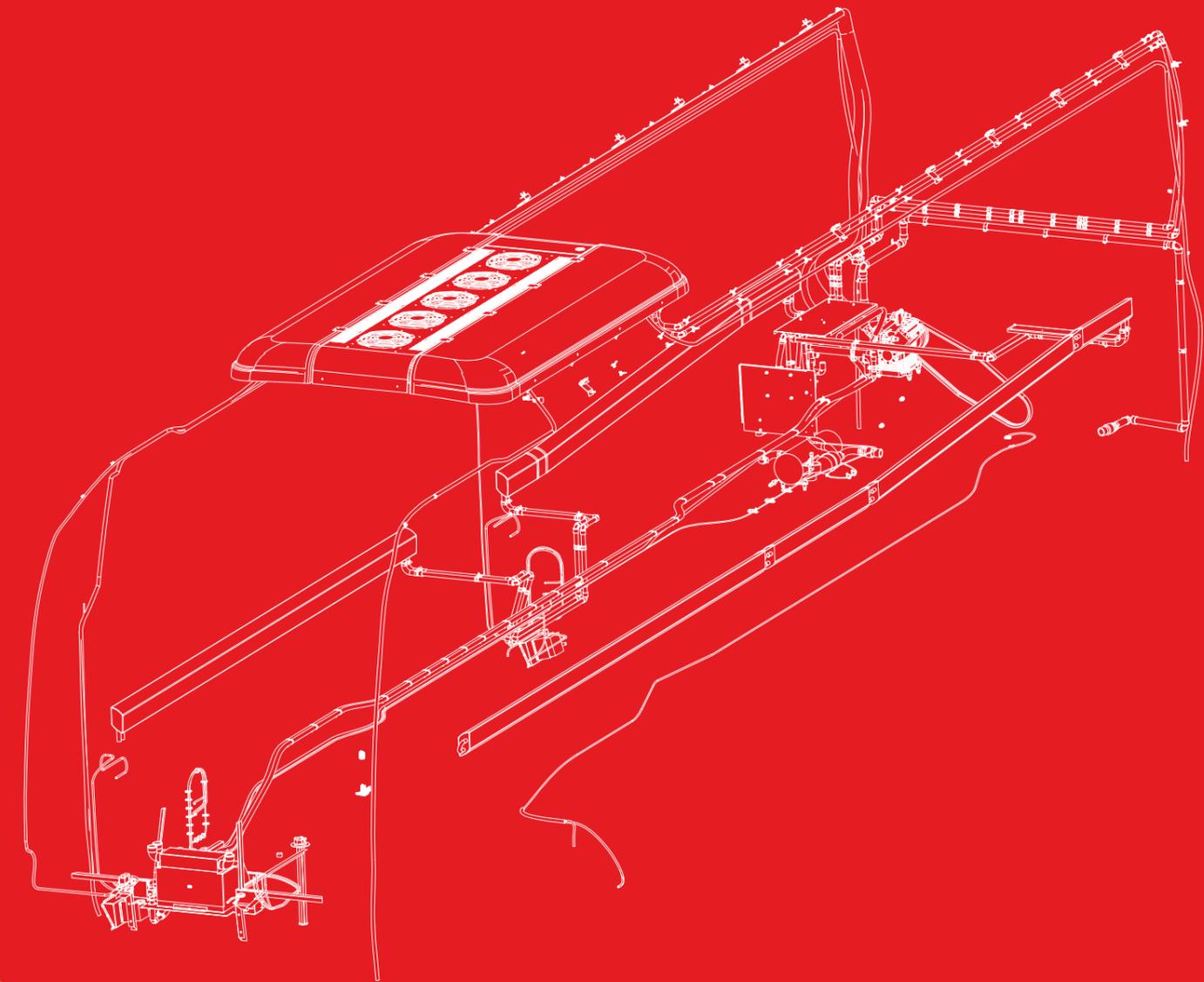
Type	ADA 1300, rigid, drive	
Suspension	4 air springs	
Permitted load	11500 kg	
Brakes	Disk / Drum	
Control system	ECAS	
Total permitted weight	18000 kg	

Steering system		
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Type	Hydraulic, servo - ZF 8097	
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Model	ZORA LHD / RHD - Euro 6 / 5 / 4 / 3	
Type	121	122
Braking system		
Primary / Working brake	Air, dual circuit system	
Auxiliary - parking brake	Retarder	
Active safety systems	ABS, ASR, ESP	
Wheel rim (steel) / Tires	8,25 x 22,5 / 295/80R21	
Electrical system		
Alternator	2 x 100 - 150 A	
Battery / voltage	2 x 225 Ah / 24 V	
Main battery switch with external socket	YES	
Instruments		
Tachograph	Digital / Euro (7 days)	
Cruise control	On steering wheel	
Speedometer	km/h with board computer	
Speed limiter	100-120 km/h according to EU or county regulation	
Fuel tank		
Capacity	310 l	400 l
Cooling and heating		
Roof unit	SPHEROS (WEBASTO) / THERMO KING / SÚTRAK	
Capacity	max 35 kW / max 45 kW	
Coolant / Gas	R134a	
AC compressor / drive	BOCK, piston, 560 m ³ , max. 3500 rpm / engine belt	
Front heater	Heating / Cooling	
Preheater		
Capacity	max 35 kW	





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