



## PRESS RELEASE

# Four inductively charged Solaris electric buses already running across Berlin

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**With the official opening of the electric bus line in Berlin a further milestone has been achieved in the development of electric mobility in the capital of Germany. Four Solaris Urbino 12 electric with a contactless inductive charging system are already moving passengers across the metropolis. In addition, Solaris battery-powered buses will improve greatly the environmental performance of the city.**

By now, electrically powered means of transport account for two thirds of the passenger traffic by Berliner Verkehrsbetriebe (BVG). Most passengers travel around Berlin by subway and trams, but also on solar-energy ferries. Today, the circle of Berlin eco-friendly vehicles has been joined by Solaris electric buses. Four Urbino 12 electric will run exclusively on the route of line 204 between Südkreuz station and Berlin Technical University as of now. Buses will pass through many important interchange points in Berlin such as Berlin Zoologischer Garten railway station, thereby significantly supporting the highly developed city transport network.

“I am delighted that test rides of the Berlin electric buses have been successfully completed. Now, together with our great partners, we will ensure that four emission-free Urbino electrics will prove their worth also in regular passenger traffic. Solaris has been at the forefront of changes in the field of electromobility. By promoting innovation and the best use of knowledge, the manufacturer actively shapes the public transport of the future. The Urbinos’ first journey on the line constitutes an important step in the broader internal security strategy. The very first venture of the Urbinos into the street constitutes an extremely important step of the process”, said Dr Andreas Strecker, CEO of Solaris Bus & Coach.

A Bombardier battery set with a capacity of 90 kWh is mounted on the roof of each Urbino electric for Berlin. Using the inductive PRIMOVE system, the vehicles will be recharged at two of the line 204 termini. Boasting an output of 200 kW, the recharging process will take just a few minutes, enabling the buses to cover the distance to the next charging station. The vehicle parameters have been revamped to ensure the buses never run out of power while driving around the crowded centre of Berlin.

The electrically powered Urbino 12 electrics for Berlin are completely emission-free. As no harmful exhaust fumes are ejected, no smell is given off either. Thanks to the noiseless and vibration-free electric drive the Solaris vehicles stand out by offering an extremely quiet and comfortable ride which improves the travelers’ experience. For the convenience of passengers, a route map presenting all the stops of the line 204 and the current position of Solaris buses has been placed on the E-Bus project’s website: <http://e-bus.berlin>.

All electric vehicles in BVG’s fleet, including the four Solaris Urbinos, run only on “green power” from renewable energy sources. It benefits passengers, local residents and the environment at the same time. With the four new buses CO<sub>2</sub> emissions will be reduced by about 260 tons per year. To achieve the same effect approximately 250 passenger cars in Berlin would have to be electrified. As the noise level of each Urbino 12 electric is similar to the one emitted by an average car, the overall noise

emissions in the German capital will be significantly reduced. For extra safety, the buses have been equipped with external speakers through which drivers can announce the departure to passengers waiting at bus stops.

Berlin's "E-Bus-Berlin" programme has received funds to the tune of €4.1 million funded by The Federal Ministry of Transport and Digital Infrastructure. The Technical University of Berlin has supported the project scientifically.

### Technical details

<b>Manufacturer</b>	Solaris Bus & Coach
<b>Type of the vehicle</b>	Urbino 12 electric
<b>Length x Width x Height</b>	12,0 m x 2,55 m x 3,35 m
<b>Gross vehicle weight</b>	18.000 kg
<b>Maximum speed</b>	65 km/h
<b>Total passenger capacity</b>	up to 70
<b>Seats</b>	33, 19 pedestal-free seats
<b>Folding seats</b>	3
<b>Drive manufacturer</b>	Vossloh Kiepe GmbH
<b>Electric motor</b>	Asynchronous central motor, Power: 160 kW Type: TSA TMF 35
<b>Battery set manufacturer</b>	Bombardier Transportation
<b>Traction batteries</b>	PRIMOVE Batterie 90, Type: lithium-ion, Capacity: 90 kWh, Voltage: 400 V
<b>Air-conditioning</b>	Konvekta UL500EM
<b>Heating system (electric)</b>	Spheros, 20 kW
<b>Front axle</b>	ZF RL 82 EC
<b>Drive axle</b>	ZF AV 132
<b>„E-Bus Berlin“ Project Data</b>	
<b>BVG Bus line</b>	204
<b>Termini</b>	S Südkreuz, S+U Zoologischer Garten (Hertzallee)
<b>Number of stops</b>	18
<b>Length of the route</b>	6,1 km
<b>Travel time?</b>	~24 min
<b>Frequency</b>	20 min
<b>Number of buses</b>	4
<b>Charging system manufacturer</b>	Bombardier Transportation
<b>Inductive charging system</b>	PRIMOVE 200 charging system, Charging power: 200 kW, Efficiency: 90%, Grid connection: AC 400 V
<b>Charging points</b>	<ul style="list-style-type: none"> <li>• 2 on the route (Südkreuz and Hertzallee)</li> <li>• 1 at the BVG depot (Indiry Gandhi street)</li> </ul>
<b>Charging time</b>	4 to 7 min on terminal stops
<b>CO<sub>2</sub> emission reduction</b>	1.300 g/Bus-km, around 260 tons annually (the whole line)
<b>Partners</b>	<ul style="list-style-type: none"> <li>• Berliner Verkehrsbetriebe (BVG) AöR (operator, consortium leader)</li> <li>• Bombardier Transportation GmbH (charging system and battery)</li> <li>• Solaris (project, manufacturing of the bus)</li> <li>• Technische Universität Berlin (system simulation, scientific support)</li> </ul>

Hertzallee charging point)

- Vossloh-Kiepe GmbH (drive, energy management)

## About Solaris Bus & Coach

*Solaris Bus & Coach is a major European producer of city, intercity and special-purpose buses as well as low-floor trams. Since the launch of production in 1996, over 12 000 vehicles have already left the factory gate in Bolechowo near Poznań. They are running in 29 countries. Despite its young age, Solaris has become one of the trendsetters in its industry. For many years it has been the indisputable leader among the suppliers of city buses in Poland as well as one of the largest suppliers of city buses in Germany.*

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## About our company

Solaris Bus & Coach sp. z o.o. is one of the leading producers of city and intercity buses in Europe. It focuses in particular on the development of zero-emission vehicles, i. e. electric and hydrogen buses as well as trolleybuses. This has resulted in the widest zero-emission product range in the European market and a leading position in this segment with a market share of 15.2%. Nearly 25,000 Solaris vehicles have been delivered so far and they ply the streets in 850 towns and cities across 33 countries located throughout Europe as well as beyond it. Solaris is part of the Spanish CAF Group (Construcciones y Auxiliar de Ferrocarriles) S.A. From conception, to the design and manufacturing phases, all Solaris buses are produced in Poland. Moreover, all activities undertaken by the manufacturer are in line with the brand's mission, which is reflected in the motto "We are changing the image of public transport". Solaris also actively partners with public transport operators and provides them with comprehensive support in their transition to zero-emission mobility.