

Irizar Group will be present in the Milan UITP trade fair with its 100% electric bus

Milan, 8 June 2015

Irizar makes its first participation in the UITP trade fair held in Milan from 8 to 10 June with a 300 m² stand on which it will present its zero emissions urban bus, the Irizar i2e. It will also present the charging station developed with technology by Irizar Group. On the same stand, you will see the solutions to the main exploitation and driving safety problems offered by Datik, a group company dedicated to developing ITS (Intelligent Transport Solutions).

The Irizar i2e is positioned in the market as the bus of the future for cities. It incorporates the latest technologies and, this way; it becomes a reference in sustainability, eco efficiency and profitability for urban mobility, that way responding to current and future needs in modern cities.

Own technology - European Know How The Irizar i2 is the first urban bus developed with our own European technology. The project is the result of the continuous work of the Irizar Group together with Creatio, the Irizar Group Research and Development Centre, from which the latest advances in complete and electrical buses have been born.

Irizar, manufacturer of coaches and buses; Hispacold, producer of climate systems; Jema, specialized in high range power electronics; Datik, technology company developing intelligent transport solutions; Masats, dedicated to accessibility systems; Alconza, to rotary machinery and Creatio R&D Centre have united their efforts to promote the Irizar i2e. They all participated in the project and are those responsible for the design, development and supply of the main vehicle components and systems.

The new Irizar electric bus offers tested first line technology developed in Europe, with innovative design including pioneer technologies in the sector and has already been tested during one year by European urban bus operators.

Innovation in sustainability Thanks to its zero emissions, as well as its silence, the Irizar i2e is the ideal transport for cities and their inhabitants. In addition to contributing to the reduction of 318.28 tons of CO₂ of yearly emission, it allows saving 33,000 litres of fuel and provides independence from the high prices of fossil fuels.

It has been developed using Ecodesign principles, involving the application of environmental and recyclability criteria in the bus design. Even the batteries are 99% recyclable; this way their durability and profitability improve operational costs.



Full autonomy The Irizar i2e has been designed to offer up to 250 km autonomy for a maximum of 16 continuous hours in dense traffic conditions.

It includes pioneer market technologies in order to optimize consumption like the Eco-Assist, a system that helps the driver in real time to reduce vehicle energy consumption and that way increase its autonomy. It allows centralising information regarding consumption, the route and the driver.

The three units that are currently in operation in San Sebastian and Barcelona, as well as the different tests that have been carried out by operators and cities like EMT (Madrid), RTM (Marseille - France), AMB, Baixbus, Tugsal (Barcelona Metropolitan Area) confirm these levels of autonomy.

Maximum profitability. The Irizar i2e offer maximum profitability based on reducing the electrical consumption, for which it incorporates the most innovative energy technologies. With a nominal power of 180 kW, the onboard energy in the vehicle is 376 kWh, thanks to which its autonomy is 250 km depending on the driving cycle and weather conditions.

In addition, the design concept of the bus has taken into consideration weight distribution and maximum component accessibility for easy maintenance.

The energy storage management system, developed by Jema Energy, manages the relation between the battery and the super condensers to maintain the charge status of both components within an optimal range as well as to extend the useful life of the various components, resulting in improved operating costs.

The Irizar i2e batteries have been in operation for 10 years as vehicle power systems, therefore it is considered a proven and reliable technology.

In addition, the Irizar i2e has the coverage of the Irizar guarantee.

Safe, reliable and comfortable The Irizar Group electrical bus has been designed to comply with the highest demands regarding active and passive safety. It is the first urban electrical bus of the market that complies with the R.66.01 anti-roll regulation.

The screwed aluminium structure of the bus is another of its innovations. In addition to thinking of its optimum modularity, it contributes to an important weight reduction and provides lower gravity centre. The rigid and strong structure is conceived to reliably support side and frontal crash situations, as well as avoiding side roll.

The software has been designed following the ISO 26262 recommendations regarding functional safety. It also has anti-skid control and with the memory system, it is capable of efficiently identifying and managing the energy flows and peaks. Like the other buses in the Irizar range, the Irizar i2e is conceived following the most demanding parameters resulting in an especially strong and reliable bus. It has been subject to hard fatigue tests and reliability tests in one of the most prestigious institutes of research, with excellent results.



The Irizar i2e is capable of maintaining the same degree of thermal comfort as the other buses in the Irizar range, because the heating and climate equipment has not been forsaken in order to achieve more autonomy. In addition to introducing the most advanced technologies in design, materials, components, and production processes, the bus has maximum quality finishes, making the Irizar i2e a completely safe and reliable bus.

ZeEUS project

Irizar is participating in the ZeEUS project, (Zero Emission Urban bus Systems), to implement electric buses in major European cities.

The objective of this innovative project is to develop high-capacity electric vehicles and to create the corresponding infrastructures for recharging to implement a fully electric solution in most European city bus networks.

Using electricity as an alternative fuel for road transport helps reduce atmospheric contamination, greenhouse gas emissions and acoustic contamination.

The project is co-financed by the European Commission (DG Mobility and Transports) and lead by The International Public Transport Union (UITP) that coordinates 40 members, Irizar among them, and represents all categories of the parties involved in mobility.

The project, with 42-month duration, will focus on showing the economic, operational, environmental and social viability of electric buses as a real alternative for mobility in urban environments based on various innovative technological solutions in eight European cities: Barcelona, London, Paris, Warsaw, Harleem, Stockholm, Munster, Pilsen, Bonn and Cagliari, with different orographic and weather conditions. San Sebastian has been an observation city for this programme.

This initiative is very important for Irizar since, in addition to being one of the most important programmes undertaken in Europe, it will be an ideal showcase for introducing the Group's technology. It will also allow Irizar to evaluate its product in operation and optimise its performance.

Latest news

Currently we are in the process of manufacturing 8 new buses, two for London city and 6 more for Marseille in France.

With this new step, Irizar not only demonstrates its capacity for adapting itself to the needs of markets and operators, the imperative regulations in those countries, but also it consolidates its intention of being positioned as worldwide leader in urban mobility.



New projects: Electromobility as future commitment of the Group Safe and sustainable transport

Irizar is decided to lead the electromobility market in cities and position itself at the vanguard in new technologies related with these concepts in order to promote the use of clean and accessible transport committed with the environment, well-being and health of persons and creating better urban environments. Our commitment to reducing acoustic contamination, obtaining lower consumption reducing costs and using zero emission vehicles. This is the new Irizar Group future strategic line.

In addition to the urban bus, which is a reality, the Group is immersed in new and ambitious projects for new products as well as the construction of new facility dedicated to this new line of activity.

The new projects under way will complement the needs for electromobility in cities as well as the main components and systems of the same: vehicles, charging systems, energy storage systems, etc.



OPERATION DATA

First vehicle delivered to Dbus in San Sebastian

In service since 23 July in the city of San Sebastian

- Operating on all 12 meter lines
- Kilometres travelled: more than 20,000 km
- Daily hours of operation: Between 14 and 16 hours

Second and third vehicles were delivered to TMB in Barcelona city

In service in Barcelona since 18 August

- Operating on line 20
- Kilometres travelled: more than 25,000 km between both vehicles.
- Hours of operation: Very soon 16h

Test performed by the Madrid EMT (Spain) November (during 1 week)

- Operating in the EMT operations centre in Carabanchel
- Circuit: 880 m with four intermediary stops with opening and closing of doors
- Equivalent result: 180 Km.
- Hours of operation: 14h

Tests performed in Marseille - From 24 November 2104 to 22 January 2015

- Operating on line 83
- Kilometres travelled: 4000 Km
- Hours of operation: 12 to 14 hours

Tests performed by AMB (Barcelona Metropolitan Area) - From 10 to 22 March

Baixbus Operator

- Operating on lines L46, L52, L96
- Kilometres travelled: 205 Km
- Daily hours of operation: 12 hours

Tugsal Operator - 25 March to 8 April

- Operating on lines B31, N11, B26
- Kilometres travelled: 147 Km
- Daily hours of operation: 11h 25