

Comprehensive electromobility solutions for cities.

100% electric
zero emission
buses.

 **Irizar e-mobility**



FOR A
BETTER
LIFE.

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FOR A BETTER LIFE

Because we want to contribute to building a better world.

Sustainable mobility is a fundamental part of the energy transition. That is why at **Irizar e-mobility** we keep being committed to turn-key electromobility solutions to provide sustainable, efficient, accessible, safe and connected public transport.



Zero emissions



Zero noise



Design



Autonomy



Irizar Group, a solid and continuously growing group.

IRIZAR GROUP



IRIZAR Group

Irizar is a business group with an **international presence** whose business is focused on the passenger transport, electromobility, electronics, electric motors and generators, connectivity and energy sectors.

The Irizar Group consists of six companies (**Irizar, Irizar e-mobility, Alconza, Hispacold, Masats and Jema**) with production operations in 11 production plants in Spain, Morocco, Brazil, Mexico and South Africa in addition to their own R&D centre whose purpose is applied research and technological development of products and systems for the Group. Irizar, S. Coop is the parent company of the Group and its central headquarters is located in Ormaiztegui (Guipúzcoa, Spain) where Creatio, the Group's Research and Development Centre, is also located.

Founded in 1889, the **Irizar Group**, with more than **3000 people**, is today a solid geographically and industrially diverse group in continuous growth that is firmly committed to the brand, to technology and to sustainability.



Irizar e-mobility headquarters in Aduna, Guipúzcoa.

IRIZAR E-MOBILITY

- +

**Zero emis-
sions vehi-
cles**
- +

**In-house
battery
packs**
- +

**Charging
infrastruc-
tures**
- +

**Fleet Ma-
nagement**
- +

**Integral
After-Sales
Service**

At Irizar e-mobility we provide integral electromobility solutions for cities, including both manufacturing **100% electric, zero-emissions vehicles** and developing and installing the main **infrastructure systems** needed for charging and energy storage. We implement all of that using in house technology and with the Irizar guarantee and quality of service.

Our range of products includes **10, 12 and 18 metre urban buses** that have been on the road since 2014 in several European cities.

All with the goal of providing operators with the additional advantage of having a single interlocutor **for all phases of the project**, including detailed consulting, integral vehicle service and after-sales service, and customised repair and maintenance (R&M).

Comprehensive electromobility solutions.



IRIZAR
E-MOBILITY

Irizar e-mobility does it for you:

- **Customized study** of the operator's service lines (data on operations, speed, climate, terrain).
 - **Guidance** with electrifying your fleet and recommendations for optimising service operation.
 - Coordination of **civil engineering**.
- **Advice** on the energy needed to embark, optimization strategy.
 - Advice on optimum parameters for power, charging strategies and times and battery life.
 - **Installation and commissioning** the system.
- **Integral monitoring and maintenance.**
 - Incorporated systems updates to optimize the life of each vehicle, improving its assets' value.

All with Irizar Group technology.



The first electromobility plant in Europe powered by **100% renewable energy**.



- 100% **self-supplied** energy using photovoltaic energy.
- 3 MW investment in Ekian, **the largest photovoltaic park** in the Basque Country.
- The supply of Ekian exceeds Irizar e-mobility's consumption by 15%.
- It includes a warehouse and domestic hot water heating system that works by **using the surplus steam** from a company located in the adjoining plot.
- And it has an **18,000 m2 manufacturing plant** designed exclusively for electromobility.
- An **innovative** and state-of-the-art plant which is open to knowledge and talent that generates wealth and employment.
- It was built with **environmental and green design principles**.
- **Energy efficiency** certificate.
- Completely sustainable production processes where personal **health and safety** are the top priority.
- Manufacturing components, products and solutions with **100% electric** zero-emissions technology.
- In house circuit and test benches.


OUR RANGE OF **100% ELECTRIC** ZERO EMISSIONS BUSES

Our buses are characterised by being exceptionally quiet and not generating emissions but also for their accessibility and modern and innovative aesthetic design.

The entire range of buses uses our latest generation batteries. The Irizar e-mobility battery portfolio provides an optimal solution for both slow charging and ultra-fast opportunity charging operations.

We can provide up to four positions for interoperable charging points using a combo 2 hose, in addition to a charging solution using an inverted pantograph or one mounted on the roof.



 **Irizar e-mobility**

OUR ZERO EMISSION ELECTRIC BUSES

The innovation and knowledge provided by the Irizar Group companies are the pillars on which we promote mobility in cities, promoting the use of the bus as the best alternative for mass transport of people in urban environments.

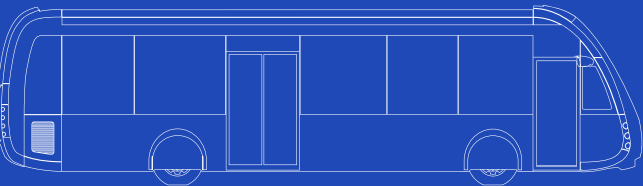
Discover our models:



Our electric buses are available in the following lengths:

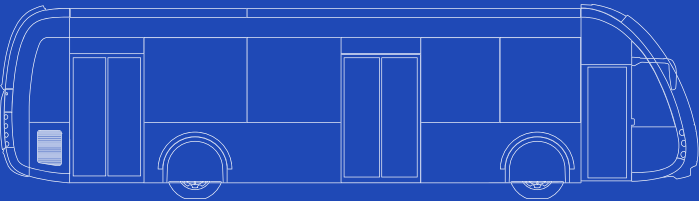
Irizar ie tram

10 metres
Two to three doors



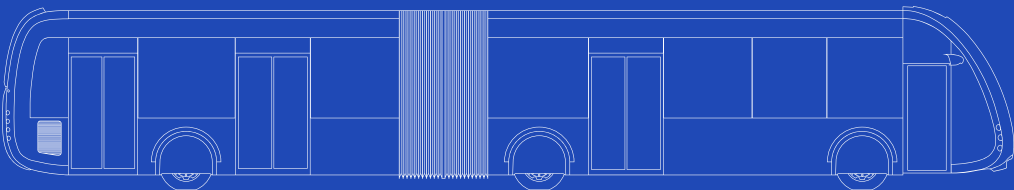
Irizar ie tram

12 metres
Two to three doors



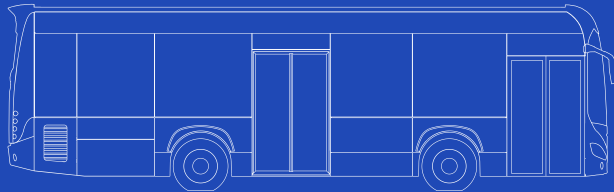
Irizar ie tram

18 metres
Up to four doors



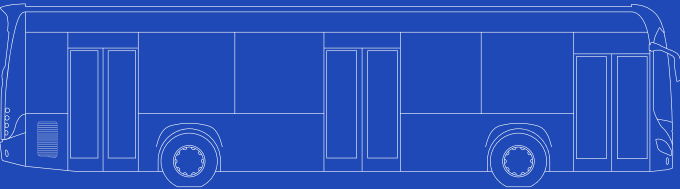
Irizar ie bus

10 metres
Two to three doors



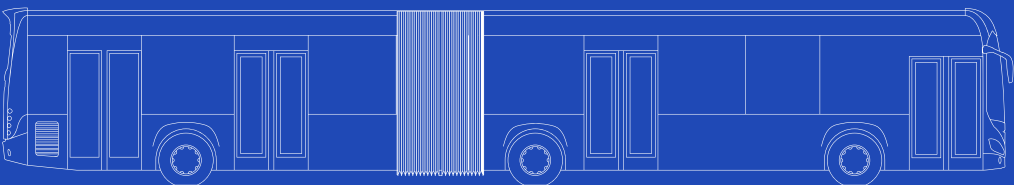
Irizar ie bus

12 metres
Two to three doors



Irizar ie bus

18 metres
Up to four doors



– BUS

Irizar ie tram

A minimalist and refined design

The combination of the **high capacity**, **ease of access** and **movement inside** of a tram with being **zero emissions** define the DNA of this new vehicle. The innovative, inspiring design of the Irizar ie tram breaks with the classic transport codes and enhances the charm of the city by reflecting urban cultural diversity.

- Available in 10, 12 and 18 metres
- Up to 300 km range
- Engine power: up to 320 kW

See page 30 for distribution and technical data.



A TRAM ON WHEELS THAT LEAVES NO ONE INDIFFERENT



The Perimeter Ring

One of the most significant characteristics of its design is the chrome perimeter arc that flows all around the volume of the vehicle and frames the large glazed surface of the sides.



The Front

Reflects fluidity and elegance. Its large glazed surface, an evocative throwback to a tram, alongside the full LED optics integrated into the perimeter rings confer a vanguard quality and impetus that is at once technological and rational on the whole.



The Rear

The rear is another aesthetic wager, bridging the rupture with the cubism of the bus.



The Hubcaps

Attention was paid to the smallest details to achieve the aesthetics of a tram.

– BUS

Irizar ie bus

Designed for the City

The bus's meticulous design inside and out makes a more attractive, **reliable and safe** vehicle. The front of the vehicle, with a more striking and elegant look, adopts the aesthetic features of Irizar's products. When it comes to the interior design, although the standard version has a more conventional specification, some of the Irizar ie tram options may be incorporated, including large windows, side lighting or screens above the windows, among others.

- Available in 10, 12 and 18 metres
- Up to 300 km range
- Engine power: up to 320 kW

See page 34 for distribution and technical data.



YOUR CITY COACH



Why choose the Irizar e-mobility electric range?

1 ACCESSIBILITY IN EVERY WAY

Our buses guarantee safe and comfortable access for all users.

- Buses with a continuous **Low Floor**.
- **Ramps**.
- Emergency opening system for **PRM accessible doors**.
- **Spaces reserved for wheelchairs** and markings on the floor.
- **Spaces for prams**.
- **Seatbelts** can be used in the wheel-chair areas.
- Reserved **priority seating** for people with reduced mobility.
- **Stop request** buttons can be in **Braille**.
- The door open buttons have **light** and **sound signals** for activation and authorisation and relief, colour contrast and a legend in Braille.
- **Interior megaphone activation** by pushing a remote control.
- **Audible stop** requested and ramp requested information.
- Grab bars that have **signage with colour contrasts**.
- **Bars next to the doors** with a different texture to indicate the exit is near.
- And a lot more...



② PROVEN SAFETY AND A DESIGN FROM THE FUTURE

Our buses use AVAS (Acoustic Vehicle Alerting System), which complies with regulation R138, and they have a new dashboard with high quality materials that comply with fire resistance regulation 118R. Moreover, they comply with anti-rolling regulation ECE-R66/02 for electric vehicles.

Our buses have been operating since 2014 in a good number of European cities. The experience and data obtained from that service period are proof of the **reliability and safety** of the vehicles.



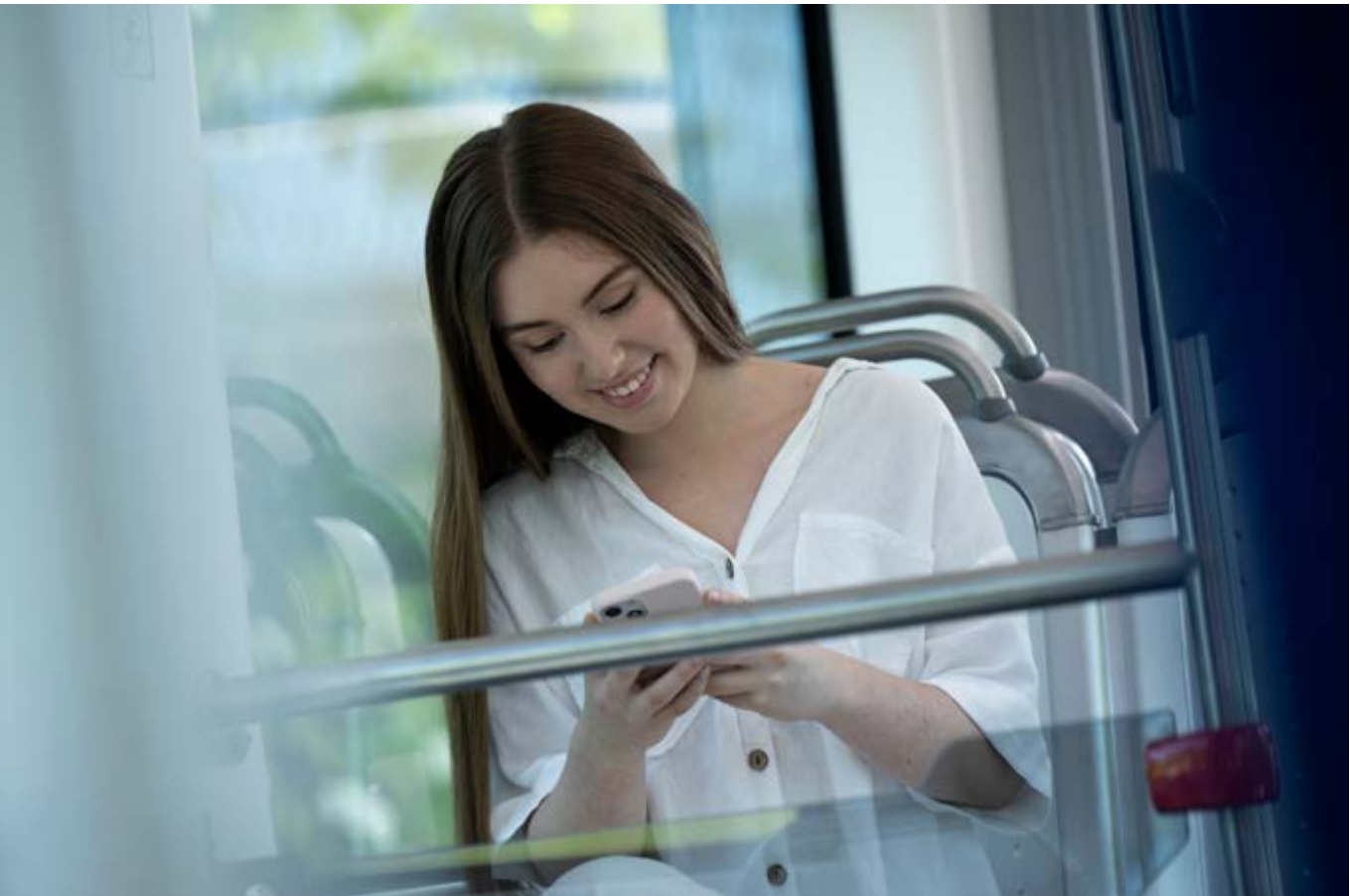


③ COMFORT WHILE DRIVING

Our design of the driver’s area puts a high priority on concepts like **ergonomics, comfort, functionality, safety and service**, following the EBSF and VDV recommendations.

We’ve developed the climate control so it has greater independence from passenger climate control. Based on our research, we’ve added new extra features in the driving area for autonomous driving, for example a double speed limiter or an electronic hand brake, among other things.

In order to reduce driver fatigue, we’ve included suspended brake and accelerator pedals, light sensors and rain sensors, etc. We also wanted to ensure safety by giving an unobstructed view of the surroundings with an optimised cabin concept, with comfortable and ergonomic access and a modular distribution and solutions (cabin door with a safety window or a closed cabin).



④ A PLEASANT AND COMFORTABLE TRIP

We have a concept of the interior that optimises passenger flow to maximise space and make trips a special experience.

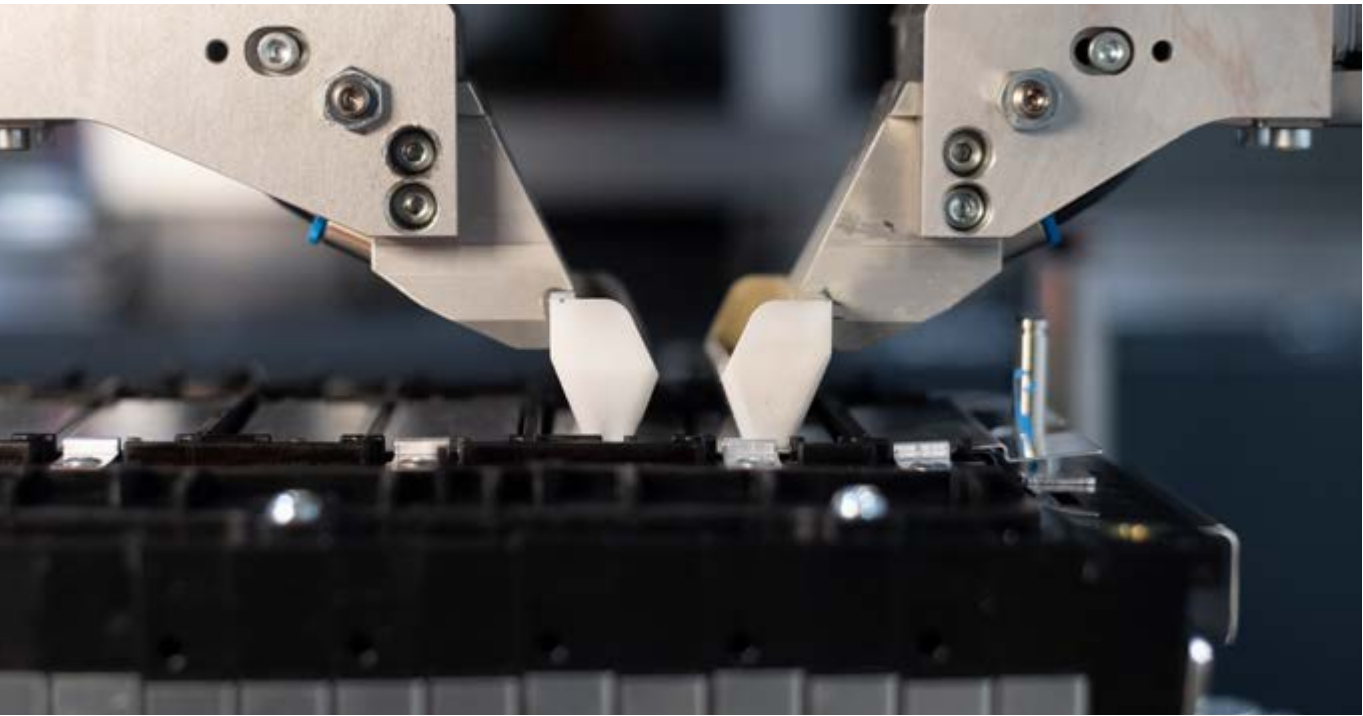
- An atmosphere **free of acoustic emissions**.
- A **quiet** vehicle, low noise level.
- A **light** and **spacious** environment.
- **Sliding electric doors** to facilitate the exit and entry of passengers, thus reducing stop time in the station.
- An **accessible** vehicle: wheelchair and pram areas, Braille.
- **Fluid movement** inside the vehicle.
- A wide range of **solutions**: USB, WiFi and buttons on the luggage racks, passenger information, interior vinyl, etc.



⑤ AHEAD IN RANGE

In European markets, our buses have a **range of approximately 300 kilometres** at an average speed of 15-17 km/h on a single 3-4 hour charge. That guarantees a full day of driving.

As part of the *tailor made* solution by Irizar e-mobility, we do energy studies of the operator's lines and we use them to quantify the energy buses need on board, with the goal of guaranteeing the maximum range possible.



IRIZAR ENERGY STORAGE AND MANAGEMENT

Our energy management and storage solutions, developed and manufactured in our Aduna plant (Guipúzcoa), are designed to cover the needs of today's European market and to offer the best solution for each of the operator's requirements.



We offer different **modular solutions**, based on Lithium-Ion technology:



	Slow Charge	Fast Charge	Ultra-Fast Charge
Designed so the vehicle can travel the maximum number of kilometres and complete the operation with a single daily charge. Its design enables us to find a balance between vehicle range and number of people.		The perfect coupling of vehicle range and charging capacity. Ideal for mixed operations , where the vehicle has sufficient battery life to operate during peak hours. The charge may be both slow and fast.	The solution for 24/7 operation with charges up to 600 kW.

	Slow Charge	Fast Charge	Ultra-Fast Charge
Loaded energy	510 - 710 kWh	470 kWh	90 - 150 kWh
Range per charge	>300 km	250 - 300 km	55 - 75 km

For vehicles that do around 65,000 km/year



OUR CHARGING SOLUTIONS ARE INTEROPERABLE

We offer a **range of smart charging options** to provide solutions to the different conditioning factors clients face in terms of power limits, as well as space and operational restrictions.



In-depot charging	Pantograph in depot	Intelligent charging system	Opportunity charging
Available from 50 kW to 180 kW in indoor and outdoor models. Up to three vehicles can be charged simultaneously with these chargers.	With this solution, we're making it possible to completely automate slow charging in garages by using pantographs. This alternative reduces the presence of cables on the floor and, therefore, improves the safety of the operators. And it leads to an optimisation of the space.	This is a custom solution that efficiently manages all the charging conditions/restrictions in the depot. It identifies the different charging needs of a fleet to optimise the total power required.	The power of the chargers varies between 450 kW and 600 kW for both pantographs mounted on the roof and inverted pantographs. Recommended when the vehicle has a reduced range and needs to charge during journeys and can be operational 24/7.



FLEET MANAGEMENT

We have fleet management systems with the latest technology on the market that can be completely personalised to cover every client’s needs.

Goal of the fleet management tools:



Help lower costs



Improve safety



Increase transport service quality




Achieve the highest fleet profitability




INTEGRAL AFTER-SALES SERVICE: ALWAYS CLOSE TO YOU

We accompany customers through the entire project life cycle, offering a comprehensive vehicle and infrastructure maintenance.




After-Sales

We have a high quality and exclusive after-sales service with personalised R&M packages managed by expert technicians and local teams.



Constant training

Constant training for high quality services.



Adaptability

Personalised solutions designed and created to provide the best in terms of technical assistance.

– DISTRIBUTION AND TECHNICAL DATA

Irizar ietram

10 m



DIMENSIONS	
Length	10.620 mm (2 axles)
Maximum height	3.300 mm
Width	2.550 mm
Wheelbase	4.415 mm
Overhang front / rear	2.805 mm / 3.400 mm
Interior height	2.400 mm
Lead angle	7°
Departure angle	7,5°
Height on step:	
• Door 1	320 mm (250 mm with kneeling)
• Door 2	340 mm (270 mm with kneeling)
Door width:	
• Door 1	730 mm
• Door 2	1.200 mm
*	
POWERTRAIN	
Type	Central synchronous motor
Nominal power	185 kW
Nominal torque	1.650 Nm
Traction capacity even on 18% maximum slopes	
ENERGY STORAGE SYSTEM	
Battery technology	Lithium-Ion: LTO, LFP, NMC
Slow charging:	
• Max. installed energy	510 kWh (depending on customer needs)
• Charging power	up to 150 kW
• Charging time	3-4 h**
Fast charging - Option 1:	
• Max. installed energy	470 kWh (depending on customer needs)
• Charging power	300 kW (pantograph) – 150 kW (Combo2)
• Charging time	5 min (pantograph) – 2h (Combo2)**
Fast charging - Option 2:	
• Max. installed energy	90 kWh (depending on customer needs)
• Charging power	450 kW
• Charging time	5 min (pantograph)**



	A	B
Num. of doors	2	2
Wheelchair areas	1	1
Num. of seats	28	26
Num. of standing passengers	35	52

For further distribution possibilities, please ask for information.

AIR CONDITIONING SYSTEM	
Driver - Hispacold Zero Emissions climate control system	(cooling: 3,5 kW, heat: 4,93 kW)
Passengers - Hispacold Zero Emissions climate control system	(cooling: 28 kW, heat: 32 kW)
PASSENGERS AREA AND ACCESSIBILITY	
Maximum No. of passengers***	96
Low Floor	
One wheelchair area	
Four seats for PRM	
Electric ramp for people with disabilities	
Two to three doors	
Possibility of assembling cantilever seats at the front area and after the articulation	
SAFETY AND REGULATION	
Compliance with fire-resistance regulation 118R, annex 6,7 and 8	
AVAS (Acoustic Vehicle Alerting System) integrated according to R138 regulation	
Compliance with standard ITxPT	
Driver are in accordance with: ISO16121, VDV234 and EBSF	
Electromagnetic compatibility regulation 10R	
Creepage and Hillholder function / EcoAssist: efficient assisted driving	
Eco-mode: intelligent management of air conditioning once the vehicle is switched off	
GSR2 General Safety Regulation	
WEIGHT	
Maximum front axle weight	8.165 Kg
Maximum rear axle weight	13.000 Kg
OTHER	
Aluminium lateral and roof structure	
Grating / floor Stainless steel	
Front divided into five parts for easy and economic interchange of external bodywork	
Acoustic insulation of ceiling and sides	
Turning diameter	17.665 mm
LED interior and exterior illumination	
Simple glazing / Anti-graffiti materials	

* For more options, please contact the sales department.
** Depending on specific operating conditions.
*** No. of standees - Data varies depending on the MAM of each country and the number and type of batteries installed on the bus.

– DISTRIBUTION AND TECHNICAL DATA

Irizar ietram

12 m



DIMENSIONS		
Length	12.160 mm (2 axles)	
Maximum height	3.400 mm	
Width	2.550 mm	
Wheelbase	5.955 mm	
Overhang front / rear	2.805 mm / 3.400 mm	
Interior height	2.400 mm	
Lead angle	7,1°	
Departure angle	7,1°	
Height on step:		
• Door 1	320 mm (250 mm with kneeling)	
• Door 2,3	340 mm (270 mm with kneeling)	
Door width:		
• Door 1	730 mm	
• Door 2	1.200 mm	
• Door 3	1.100 mm	
*		
POWERTRAIN		
Type	Central synchronous motor	
Nominal power	185 kW	
Nominal torque	1.650 Nm	
Traction capacity even on 18% maximum slopes		

ENERGY STORAGE SYSTEM		
Battery technology	Lithium-Ion: LTO, LFP, NMC	
Slow charging:		
• Max. installed energy	510 kWh (depending on customer needs)	
• Charging power	up to 150 kW	
• Charging time	3-4 h**	
Fast charging:		
• Max. installed energy	470 kWh (depending on customer needs)	
• Charging power	300 kW (pantograph) – 150 kW (Combo2)	
• Charging time	5 min (pantograph) – 2h (Combo2)**	
Ultra-fast charging:		
• Max. installed energy	90 kWh (depending on customer needs)	
• Charging power	450 kW	
• Charging time	5 min (pantograph)**	

	A	B
Num. of doors	3	3
Wheelchair areas	1	3
Num. of seats	29	22
Num. of standing passengers	67	74

For further distribution possibilities, please ask for information.

AIR CONDITIONING SYSTEM	
Driver - Hispacold Zero Emissions climate control system	(cold: 3,5 kW, heat: 13 kW)
Passengers - Hispacold Zero Emissions climate control system	(cold: 28 kW, heat: 32 kW)
PASSENGERS AREA AND ACCESSIBILITY	
Maximum No. passengers***	105
Low - Floor	
One or two wheelchair areas	
Four seats for PRM	
Electric ramp for people with disabilities	
Two to three doors	
Possibility of assembling cantilever seats at the front area	
SAFETY AND REGULATION	
Compliance with fire-resistance regulation 118R, annex 6,7 and 8	
AVAS (Acoustic Vehicle Alerting System) integrated according to R138 regulation	
Compliance with standard ITxPT	
Driver are in accordance with: ISO16121, VDV234 and EBSF	
Electromagnetic compatibility regulation 10R	
Creepage and Hillholder function / EcoAssist: efficient assisted driving	
Eco-mode: intelligent management of air conditioning once the vehicle is switched off	
GSR2 General Safety Regulation	

WEIGHT	
Maximum front axle weight	8.200 Kg
Maximum rear axle weight	13.000 Kg

OTHER	
Aluminium lateral and roof structure	
Grating / floor Stainless steel	
Front divided into five parts for easy and economic interchange of external bodywork	
Acoustic insulation of ceiling and sides	
Turning diameter	21.374 mm
LED interior and exterior illumination	
Anti-graffiti materials	

* For more options, please contact the sales department.
** Depending on specific operating conditions.
*** No. of standees - Data varies depending on the MAM of each country and the number and type of batteries installed on the bus.

– DISTRIBUTION AND TECHNICAL DATA

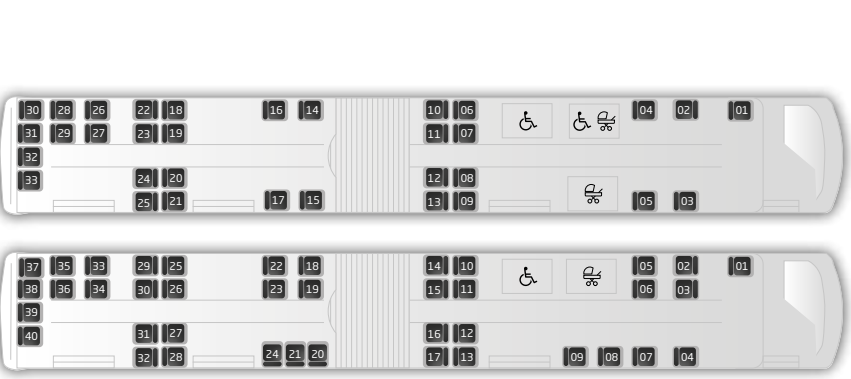
Irizar ietram

18 m



DIMENSIONS		
Length	18.100 mm (3 axles) / 18.730 mm (3 axles)	
Maximum height	3.400 mm	
Width	2.550 mm	
Wheelbase 1	5.980 mm	
Wheelbase 2	5.914 mm / 6.540 mm	
Overhang front / rear	2.805 mm / 3.400 mm	
Interior height	2.400 mm	
Lead angle	7,1°	
Departure angle	7,1°	
Height on step:		
• Door 1	320 mm (250 mm with kneeling)	
• Door 2,3,4	340 mm (270 mm with kneeling)	
Door width:		
• Door 1	730 mm	
• Door 2, 3	1.200 mm	
• Door 4	1.000 mm	
*		
POWERTRAIN		
Type	Central synchronous motor	
Nominal power	285 kW	
Nominal torque	2.200 Nm	
Traction capacity even on 15% maximum slopes		

ENERGY STORAGE SYSTEM		
Battery technology	Lithium-Ion: LTO, LFP, NMC	
Slow charging:		
• Max. installed energy	714 kWh (depending on customer needs)	
• Charging power	150 kW	
• Charging time	4,5 h**	
Fast charging:		
• Max. installed energy	470 kWh (depending on customer needs)	
• Charging power	300 kW (pantograph) – 200 kW (Combo2)	
• Charging time	5 min (pantograph) – 2h (Combo2)**	
Ultra-fast charging:		
• Max. installed energy	180 kWh (depending on customer needs)	
• Charging power	600 kW	
• Charging time	5 min (pantograph)**	



	A	B
Num. of doors	4	4
Wheelchair areas	3	2
Num. of seats	33	40
Num. of standing passengers	118	115

For further distribution possibilities, please ask for information.

AIR CONDITIONING SYSTEM		
Driver - Hispacold Zero Emissions climate control system	(cooling: 3.5 kW, heat: 13 kW)	
Passengers - Hispacold Zero Emissions climate control system	(cooling: 56 kW, heat: 64 kW)	

PASSENGERS AREA AND ACCESSIBILITY	
Maximum No. of passengers***	145
Low Floor	
One or two wheelchair / pram areas	
Four seats for PRM	
Up to four doors available	
Electric ramp for people with disabilities	
Possibility of assembling cantilever seats at the front area and after the articulation	

SAFETY AND REGULATION	
Compliance with fire-resistance regulation 118R, annex 6,7 and 8	
AVAS (Acoustic Vehicle Alerting System) integrated according to R138 regulation	
Compliance with standard ITxPT	
Driver are in accordance with: ISO16121, VDV234 and EBSF	
Electromagnetic compatibility regulation 10R	
Creepage and Hillholder function / EcoAssist: efficient assisted driving	
Eco-mode: intelligent management of air conditioning once the vehicle is switched off	
GSR2 General Safety Regulation	

WEIGHT	
Maximum weight on front axle	8.200 Kg
Maximum weight on axle 2	10.000 Kg
Maximum weight on axle 3	13.000 Kg

OTHER	
Aluminium lateral and roof structure	
Grating / floor Stainless steel	
Front divided into five parts for easy and economic interchange of external bodywork	
Acoustic insulation of ceiling and sides	
Turning diameter	23.780 mm
LED interior and exterior illumination	
Simple glazing	
Anti-graffiti materials	

* For more options, please contact the sales department.
** Depending on specific operating conditions.
*** No. of standees - Data varies depending on the MAM of each country and the number and type of batteries installed on the bus.

– DISTRIBUTION AND TECHNICAL DATA

Irizar ie bus

10 m



DIMENSIONS	
Length	10.620 mm (2 axles)
Maximum height	3.300 mm
Width	2.550 mm
Wheelbase	4.415 mm
Overhang front / rear	2.805 mm / 3.400 mm
Interior height	2.400 mm
Lead angle	7°
Departure angle	7,5°
Height on step:	
• Door 1	320 mm (250 mm with kneeling)
• Door 2	340 mm (270 mm with kneeling)
Door width:	
• Door 1	1.100 mm
• Door 2	1.200 mm
*	
POWERTRAIN	
Type	Central synchronous motor
Nominal power	185 kW
Nominal torque	1.650 Nm
Traction capacity even on 18% maximum slopes	
ENERGY STORAGE SYSTEM	
Battery technology	Lithium-Ion: LTO, LFP, NMC
Slow charging:	
• Max. installed energy	510 kWh (depending on customer needs)
• Charging power	up to 150 kW
• Charging time	3-4 h**
Fast charging - Option 1:	
• Max. installed energy	470 kWh (depending on customer needs)
• Charging power	300 kW (pantograph) – 150 kW (Combo2)
• Charging time	5 min (pantograph) – 2h (Combo2)**
Fast charging - Option 2:	
• Max. installed energy	90 kWh (depending on customer needs)
• Charging power	450 kW
• Charging time	5 min (pantograph)**



	A	B
Num. of doors	2	2
Wheelchair areas	1	1
Num. of seats	28	26
Num. of standing passengers	35	52

For further distribution possibilities, please ask for information.

AIR CONDITIONING SYSTEM	
Driver - Hispacold Zero Emissions climate control system	(cooling: 3,5 kW, heat: 4,93 kW)
Passengers - Hispacold Zero Emissions climate control system	(cooling: 28 kW, heat: 32 kW)
PASSENGERS AREA AND ACCESSIBILITY	
Maximum No. of passengers***	96
Low Floor	
One wheelchair area	
Four seats for PRM	
Electric ramp for people with disabilities	
Two to three doors	
Possibility of assembling cantilever seats at the front area and after the articulation	
SAFETY AND REGULATION	
Compliance with fire-resistance regulation 118R, annex 6,7 and 8	
AVAS (Acoustic Vehicle Alerting System) integrated according to R138 regulation	
Compliance with standard ITxPT	
Driver are in accordance with: ISO16121, VDV234 and EBSF	
Electromagnetic compatibility regulation 10R	
Creepage and Hillholder function / EcoAssist: efficient assisted driving	
Eco-mode: intelligent management of air conditioning once the vehicle is switched off	
GSR2 General Safety Regulation	
WEIGHT	
Maximum front axle weight	8.165 Kg
Maximum rear axle weight	13.000 Kg
OTHER	
Aluminium lateral and roof structure	
Grating / floor Stainless steel	
Front divided into five parts for easy and economic interchange of external bodywork	
Acoustic insulation of ceiling and sides	
Turning diameter	17.665 mm
LED interior and exterior illumination	
Simple glazing / Anti-graffiti materials	

* For more options, please contact the sales department.
** Depending on specific operating conditions.
*** No. of standees - Data varies depending on the MAM of each country and the number and type of batteries installed on the bus.

– DISTRIBUTION AND TECHNICAL DATA

Irizar ie bus

12 m



DIMENSIONS		
Length	12.160 mm (2 axles)	
Maximum height	3.300 mm	
Width	2.550 mm	
Wheelbase	5.955 mm	
Overhang front / rear	2.805 mm / 3.400 mm	
Interior height	2.400 mm	
Lead angle	7°	
Departure angle	7,5°	
Height on step:		
• Door 1	320 mm (250 mm with kneeling)	
• Door 2,3	340 mm (270 mm with kneeling)	
Door width:		
• Door 1	1.100 mm	
• Door 2	1.200 mm	
• Door 3	1.100 mm	
*		
POWERTRAIN		
Type	Central synchronous motor	
Nominal power	185 kW	
Nominal torque	1.650 Nm	
Traction capacity even on 18% maximum slopes		

ENERGY STORAGE SYSTEM		
Battery technology	Lithium-Ion: LTO, LFP, NMC	
Slow charging:		
• Max. installed energy	510 kWh (depending on customer needs)	
• Charging power	up to 150 kW	
• Charging time	5 h**	
Fast charging:		
• Max. installed energy	470 kWh (depending on customer needs)	
• Charging power	300 kW (pantograph) – 150 kW (Combo2)	
• Charging time	5 min (pantograph) – 2h (Combo2)**	
Ultra-fast charging:		
• Max. installed energy	90 kWh (depending on customer needs)	
• Charging power	450 kW	
• Charging time	5 min (pantograph)**	



	A	B
Num. of doors	2	3
Wheelchair areas	2	1
Num. of seats	33	31
Num. of standing passengers	47	48

For further distribution possibilities, please ask for information.

AIR CONDITIONING SYSTEM		
Driver - Hispacold Zero Emissions climate control system	(cooling: 3,5 kW, heat: 4,93 kW)	
Passengers - Hispacold Zero Emissions climate control system	(cooling: 28 kW, heat: 32 kW)	

PASSENGERS AREA AND ACCESSIBILITY	
Maximum No. of passengers***	105
Low Floor	
One or two wheelchair/pram areas	
Four seats for PRM	
Manual ramp	
Two to three doors	
Possibility of assembling cantilever seats	

SAFETY AND REGULATION		
Compliance with fire-resistance regulation 118R, annex 6,7 and 8		
AVAS (Acoustic Vehicle Alerting System) integrated according to R138 regulation		
Compliance with standard ITxPT		
Driver are in accordance with: ISO16121, VDV234 and EBSF		
Electromagnetic compatibility regulation 10R		
Creepage and Hillholder function / EcoAssist: efficient assisted driving		
Eco-mode: intelligent management of air conditioning once the vehicle is switched off		
GSR2 General Safety Regulation		

WEIGHT		
Maximum front axle weight	8.200 Kg	
Maximum rear axle weight	13.000 Kg	

OTHER		
Customizable internal illumination		
Charging possibilities: front, lateral or rear		
Wheel covers option		
Turning diameter	21.374 mm	
Anti-graffiti materials		

* For more options, please contact the sales department.
** Depending on specific operating conditions.
*** No. of standees - Data varies depending on the MAM of each country and the number and type of batteries installed on the bus.

– DISTRIBUTION AND TECHNICAL DATA

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18 m



DIMENSIONS		
Length	18.100 mm (3 axles) / 18.730 mm (3 axles)	
Maximum height	3.300 mm	
Width	2.550 mm	
Wheelbase 1	5.980 mm	
Wheelbase 2	5.914 mm / 6.540 mm	
Overhang front / rear	2.805 mm / 3.400 mm	
Interior height	2.400 mm	
Lead angle	7°	
Departure angle	7,5°	
Height on step:		
• Door 1	320 mm (250 mm with kneeling)	
• Door 2,3,4	340 mm (270 mm with kneeling)	
Door width:		
• Door 1, 4	1.100 mm	
• Door 2, 3	1.200 mm	
*		
POWERTRAIN		
Type	Central synchronous motor	
Nominal power	285 kW	
Nominal torque	2.200 Nm	
Traction capacity even on 15% maximum slopes		

ENERGY STORAGE SYSTEM		
Battery technology	Lithium-Ion: LTO, LFP, NMC	
Slow charging:		
• Max. installed energy	714 kWh (depending on customer needs)	
• Charging power	150 kW	
• Charging time	4,5 h**	
Fast charging:		
• Max. installed energy	470 kWh (depending on customer needs)	
• Charging power	300 kW (pantograph) – 200 kW (Combo2)	
• Charging time	5 min (pantograph) – 2h (Combo2)**	
Ultra-fast charging:		
• Max. installed energy	180 kWh (depending on customer needs)	
• Charging power	600 kW	
• Charging time	5 min (pantograph)**	

	A	B
Num. of doors	4	4
Wheelchair areas	3	2
Num. of seats	34	41
Num. of standing passengers	117	114

For further distribution possibilities, please ask for information.

AIR CONDITIONING SYSTEM	
Driver - Hispacold Zero Emissions climate control system	(cooling: 3,5 kW, heat: 4,93 kW)
Passengers - Hispacold Zero Emissions climate control system	(cooling: 56 kW, heat: 64 kW)
PASSENGERS AREA AND ACCESSIBILITY	
Maximum No. of passengers***	145
Low Floor	
One or two wheelchair/pram areas	
Four seats for PRM	
Up to four doors available	
Electric ramp for people with disabilities	
Possibility of assembling cantilever seats at the front area and after the articulation	
SAFETY AND REGULATION	
Compliance with fire-resistance regulation 118R, annex 6,7 and 8	
AVAS (Acoustic Vehicle Alerting System) integrated according to R138 regulation	
Compliance with standard ITxPT	
Driver are in accordance with: ISO16121, VDV234 and EBSF	
Electromagnetic compatibility regulation 10R	
Creepage and Hillholder function / EcoAssist: efficient assisted driving	
Eco-mode: intelligent management of air conditioning once the vehicle is switched off	
GSR2 General Safety Regulation	

WEIGHT	
Maximum weight on front axle	8.200 Kg
Maximum weight on axle	10.000 Kg
Maximum weight on axle	13.000 Kg

OTHER	
Aluminium lateral and roof structure	
Grating / floor Stainless steel	
Front divided into five parts for easy and economic interchange of external bodywork	
Acoustic insulation of ceiling and sides	
Turning diameter	23.780 mm
LED interior and exterior illumination	

* For more options, please contact the sales department.
**Depending on specific operating conditions.
*** No. of standees - Data varies depending on the MAM of each country and the number and type of batteries installed on the bus.



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