



BUROTEC

EV CHARGING STATION

www.burotec.es



ELECTRIC VEHICLES RECHARGE



In the fight to promote the use of electric vehicles that help take care of the environment. Our objective is that the availability of points for the recharge does not suppose an impediment for the acquisition of the same ones.

Our mission is to revolutionize the recharging of electric vehicles. BUROTEC offers you the necessary infrastructure to charge the battery of your electric vehicle in the comfort of your garage (single family or community) and with maximum security.

Likewise, BUROTEC develops recharging facilities in car dealerships, public car parkings and service stations.

BUROTEC SERVICES

CONSULTORY

In our consulting department, we take care of the electric mobility assessment to determine the specific needs of each client, based on electromobility studies, models and strategic electric mobility plans that certify great economic savings and environmental efficiency.

ENGINEERING

In our engineering department we take care of creating a configuration of the project to carry out a design and dimensioning of intelligent recharging equipment according to the needs of the client and the vehicle.

INTEGRAL SOLUTIONS (EPC Full-Turnkey)

Our company can carry out integral EPC projects ("turnkey") in case the client asks us to integrate the project and the direction of the works, making only a subcontracting of installation work to specialized companies, and supervised always by our engineers who have defined the project.

MISSION AND VISION

At **BUROTEC** we work to solve a new form of mobility based on electric vehicles. We propose new more competitive mobility models, from an economic, social and environmental point of view, through the application of new management technologies that solve the integration of the electric vehicle and its charging infrastructures.

Our electric mobility consulting and engineering company **BUROTEC**, aims to be a reference company for all those people or companies with fleets of vehicles that have been considering acquiring electric vehicles, as well as for parking management companies, which need the installation of recharge terminals and want to offer an electric recharge service to their customers.

In **BUROTEC** we bet on sustainable mobility and we want to become a leading company and European reference in the coming years, providing all kinds of services related to the recharging of electric vehicles, the installation and management of intelligent recharging infrastructures, collaborating in the development of this type of vehicles with criteria of sustainability and respect for the environment.

TYPES OF ELECTRIC VEHICLE

-**BEV:** Vehicle with plug-in rechargeable electric battery.

-**HEV:** Electric hybrid vehicle, the battery is only recharged by the conventional engine.

-**PHEV:** Electric hybrid vehicle with rechargeable plug-in battery.

-**REEV:** Vehicle with plug-in rechargeable electric battery and conventional motor exclusively for recharging the battery.

-**FCEV:** Electric vehicle with hydrogen battery.



ESTIMATED CHARGING TIMES ACCORDING TO TYPES OF STATION

Power	Time (80% charged)
80 KW	40-50 Minutes
50 KW	1 - 2 Hours
22 KW	3 - 4 Hours
7,0 KW	5 - 7 Hours
3,5 KW	8 - 10 Hours

TYPES OF INSTALLATIONS ACCORDING TO THEIR CHARACTERISTICS

- **Slow recharge (conventional).** It uses the electrical voltage of the same level as the house, with 16 A or less, demanding about 3.6 KW of power. The full recharge of the electric vehicle takes between 8 and 10 hours maximum. This system can be used in your own garage or in a communal one and it is usually used during the night, since there is less energy demand.
- **Semi-fast recharge.** It employs 32 A and 230 VAC electrical voltage. This means that the electrical power it needs is about 7.3 KW. By this procedure the battery usually takes about five hours to charge. This type of device is also possible to install in your own garage or in a communal one.
- **Fast charge.** It requires a greater electrical intensity and, in addition, delivers the energy in direct current. The power demanded is greater than 50 KW. It is the one that most resembles the current refueling in conventional gas stations. In about 30 minutes, the battery can be recharged by 80% with a power of 120 KW. This type of device is not possible to install in any garage, neither own nor community, since it requires an adaptation of the electrical network due to its power demand.

ELECTRIC RECHARGEABLE BATTERY VEHICLE PLUGGABLE

The basic types of charge are defined in EN 61851-1.

Types of charges

RECHARGE ELECTRIC VEHICLE 80%

NORMAL ELECTRIC VEHICLE BATTERY 20-22-24 KWh - 100Km

TYPE	USE	POWER KW	TENSION ENTRY V	INTENSITY INPUT A	TENSION ENTRY V	OUTPUT CURRENT A	CHARGING TIME		
							h	min	
STANDARD	TYPE 1 o TYPE 2	HOUSE	3,7	230 AC FN	16		AC	10	
SEMI-FAST	TYPE 1 o TYPE2	OFFICE	7,4	230 AC FN	32		AC	5	
SEMI-FAST	TYPE 3	PUBLIC ROAD							
		EV CHARGING STATION	11	3 x 400 AC	16		AC	4	
SEMI-FAST AC	TYPE 3	PUBLIC ROAD							
		EV CHARGING STATION	22	3 x 400 AC	32		AC	3	
SEMI-FAST DC	TYPE 3	PUBLIC ROAD							
		EV CHARGING STATION	43	3 x 400 AC	63	500 DC	86	DC	2
FAST	TYPE 4	PUBLIC ROAD							
		EV CHARGING STATION	55	3 x 400 AC	80	500 DC	125	DC	1
FAST	TYPE 4	PUBLIC ROAD							
		EV CHARGING STATION	80	3 x 400 AC	110	500 DC	160	DC	42
SUPER FAST	TYPE 4	PUBLIC ROAD							
		FREEWAY	120	3 x 400 AC	170	500 DC	240	DC	30
SUPER FAST	TYPE 4	PUBLIC ROAD							
		FREEWAY	250	3 x 400 AC	360	600 DC	420	DC	15
ULTRA FAST	TIPE4	PUBLIC ROAD							
		FREEWAY	350	3 x 400 AC	500	600 DC	580	DC	10

The average refueling time for hydrocarbons is 5 minutes.

CHARGING POINTS

Indoor recharge

The recharging points are installed inside garages and parking garages.



Outdoor recharge

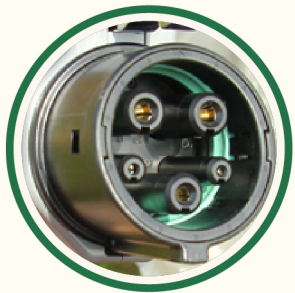
The recharging points are installed in the open.



CHARGING POINTS



DE 7 PINS – IEC 62196-2 -
MENNEKES



5 PINS – SAE J1772-
YAZAQUI



DE 5 o 9 PINS –
IEC 62196-3 - CCS 2 –
COMBO 2



DE 4 PINS – CHADEMO

FACILITIES- NECESSARY INFRASTRUCTURE

Up to a power of 80 KW the installations are made in Low Voltage,
from that power are made in Medium Voltage.

PROCEDURES AND MANAGEMENT

The Autonomous Communities have exclusive competence in relation to the production, distribution and transport facilities of any type of energy, when the transport does not leave its territory and its use does not affect another Community.

Each Autonomous Community, by virtue of Law 30/1992, of November 26, on the Legal Regime of Public Administrations and the Common Administrative Procedure, which in its Article 30.4 establishes the duty that Public Administrations have to establish standardized models and systems of requests, procedures and contents, in the case of files that involve the numerous resolution of a series of procedures.

In relation to the above regarding the MV facilities each Autonomous Community has its own applications, procedures and contents, which may vary substantially from one Autonomous Community to another.

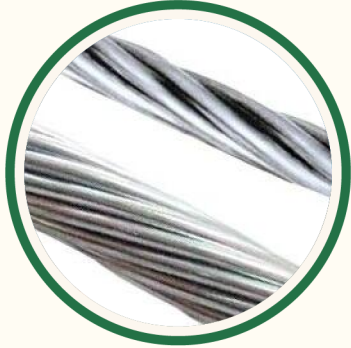
- Request for access to the Network.
- Obtaining Conformity from a Distribution Company to connect the installation to its network.
- Processing and management of access and extension rights.
- List of assets and rights of necessary expropriation.
- Establishment and obtaining of rights of way for facilities.
- Availability of land affected by the planned facilities.
- Offprint of Crossings and Parallels on goods and Rights of Administrations and services of general interest.
- Obtaining Conditions from Public Organizations.
- Project drafted and approved by a Competent Technician.
- Environmental Document of the Project.
- Technical Management Certificate.
- Final Certificate of work.
- Processing of the Project in the General Directorate of Industry.
- Municipal procedures for the application of Work and Activity Licenses.
- Payment of fees
- Obtaining the Start-up Act.

STANDARDS

- Royal Decree 2.135 / 1980, of September 26 on industrial liberalization.
- Royal Decree 1955/2000, of December 1, regulating the activities of transportation, distribution, marketing, supply and authorization procedures for electric power installations.
- Royal Decree 337/2014, of May 9, which approves the Regulation on technical conditions and safety guarantees in high voltage electrical installations and its Complementary Technical Instructions ITC-RAT 01 to 23.
- Royal Decree 223/2008, of February 15, which approves the Regulation on technical conditions and safety guarantees in high voltage power lines and their complementary technical instructions ITC-LAT 01 to 09.
- Royal Decree 842/2002, of August 2, which approves the electrotechnical regulation for low voltage.
- Autonomic regulations.

HIGH VOLTAGE ELECTRIC LINES

HIGH VOLTAGE AERIAL LINES

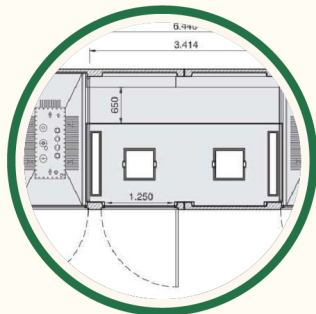


BURIED HIGH VOLTAGE LINES



TRANSFORMATION CENTERS

SURFACE TRANSFORMATION CENTER



BURIED TRANSFORMATION CENTER



EQUIPMENT

TRANSFORMERS





TRANSFORMATION CENTERS

HIGH VOLTAGE CABINS



REGULATIONS AND STANDARDIZATIONS

Standardization organization

	General	Electrotechnology	Communication
Global	ISO TC 22/SC 21	 SC 23H, TC 64, 69, 121B	ITU
Europe	CEN TC 301	 TC 23H, 64, 69X	ETSI

PARTICULAR RULES IN SPAIN

- Law 19/2009 of November 23: on measures of promotion and agility procedural rent and energy efficiency of buildings.
- RD 647/2011 of May 9, which regulates the activity of the reach manager.
- RD 1053/2014, of December 12, which establishes the requirements and the basic technical conditions of the infrastructure necessary to enable the effective and safe recharging of electric vehicles.
- RD 639/2017, establishes a framework of measures for the implementation of an infrastructure for alternative fuels.
- REBT ITC BT 52.

Boosting electric mobility

- Electric mobility strategy for cities
- Development of action programs to increase electric vehicles in the city

Recharge infrastructure for electric vehicles

- Engineering design and sizing projects for its correct installation.
- Installation works management
- Projects for its management and maintenance plan
- User Management

Training courses for electric mobility

EV RECHARGING SOLUTIONS

We offer services and solutions for the design and installation of charging systems for electric vehicles

If you have an electric vehicle we offer the solution that best suits your needs, with a close, professional and adjusted to your budget.

Our method of work:

- Study and analyze the best solution.
- Present a detailed offer, tailored for you and at the best price.
- Installation by our specialized technicians.
- We guarantee maximum satisfaction.

1
CONTACT



2
PREVIEW STUDY



3
INSTALATION



CLIENTE	VEHICLES	PARKING	TYPE OF RECHARGE	CONTROL
CLIENT	BIKE	SINGLE FAMILY	STANDARD	SIMPLE
SPECIAL	MOTORCYCLE	COMMUNITY	QUICK	WITH COUNTER
COMPANY	CAR	PUBLIC PARKING	SUPER QUICK	WITH PAYMENT
PUBLIC ADMINIS- TRATION	OTHERS	FLEET		WITH COMMUNICATIONS

CONTACTO

info@burotec.es

+34 91 376 89 50



@Burotec_Es



Burotec Consultoría Técnica



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www.burotec.es

Av. Cardenal Herrera Oria 326 A-B. 28035, Madrid