



**UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH**

**Departament d'Enginyeria de Projectes
i de la Construcció**

ESEIAAT

Departament d'Enginyeria de Projectes i de la Construcció

**Project of parking design with metal structure
with class 4 profiles for electric vehicles and use
of solar energy**

MEMORY

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SCOPE STATEMENT

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<h1>SCOPE STATEMENT</h1>		

Chapter 1. Description of the project

The project consists of the design and study of the feasibility of constructing an outdoor parking for electric cars with profile class 4 using galvanized steel with the technique of steel framing.

1.1 Definition and scope of the scope statement

The specifications are the document that regulates the relationships between the owner and the owner Contractor who executes the project, sets forth generic legal provisions of the Project and technical conditions of the materials and components of the machine. Contains the necessary information so that the relations are as fruitful as possible, taking into account the importance of the economic cost that originates. It is therefore, from the legal and contractual point of view, the most important document in the project in the material execution.

The legal constraints, and the responsibilities and obligations of each party are included. It is understood as part of the property (project promoter), the manufacturer, the suppliers and all those actors that participate in the realization of this project.

This document, gifts, in addition to the contract between property and manufacturer, establishes the Legal terms to deal with possible disputes or doubts that may arise in the Previous aspects and others specified in this document, taking into account that the acceptance of the project í, with the specifications, measurements, characteristics and Plans act as legal contract in case of conflict between property and Supplier or manufacturer of the execution.

1.2 Documentation of the project

The following documents are included in the project:



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- Memory and Annexes
- Drawings
- Terms of Service
- Budget

We understand as contract documents those that are obligatory fulfilment and these documents are the plans and scope statement. The rest of the documents of the Project are informative and are constituted by the Report, Annexes and the Budget.

In the case of a contradiction between the Plans and the Specific Technical Requirements contained in this Specification of Terms, prevails what has been prescribed in these Terms. In either case, both documents have preference over the general conditions contained in this document.

Chapter 2. Specific conditions

2.1. EC Regulations. Homologation

This design will have to undergo homologation tests in order to comply with international standards and make it possible to sell them at the state or international level.

Among others, the CE marking rules are what makes this purpose possible. Specifically, marking implies:

- Security through the fulfilment of the essential security requirements mentioned in the directive.



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- The impossibility of a member state being able to prohibit, restrict or impede the commercialization or installation of elements that do not comply with the requirements of the directive.

Among others, you will have to overcome the following European directives:

- Directive 2004/108 / EC, of electromagnetic compatibility
- Directive 73/23 / EEC, on Electrical equipment intended for use with certain voltage limits.
(for the case of installed electrical components)

It will be an independent laboratory that certifies the compliments of these international executives and other possible not mentioned in this section.

The designer declares that the car park does not have to be put into operation until the car park as a whole has been declared in accordance with the aforementioned directives.

Once these approvals have been passed, along with the completion of the technical characteristics of the car park, the certificate for execution and implementation in the urban environment can be obtained.

2.2. Construction regulations.

The metal parts of the frame must have a uniform appearance and without defects

The different metal parts must have the shape and dimensions specified in the technical documentation.

The car park must be watertight to prevent leakage of water.

These must be designed and constructed in such a way that their characteristics in normal use are safe and safe for the user.



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During the manufacture, the elements will be fixed by fixing tools, which must be fixed to a table or bench, ensuring the correct soldering.

The elements that have contact and rubbing between them must be perfectly flat their faces and lubricate properly.

2.3. Maintenance

Correct maintenance of the car park will be borne by the client. However, in order to facilitate this end, a preventive maintenance file will be offered, indicating the points to be reviewed, in addition to the periodic and mandatory technical inspections that the car park must pass. An assembly and disassembly manual will also be delivered at the time of purchase.

2.4. Security and ergonomics

Although security directives and regulations try to avoid risks, a risk assessment will be carried out, with its danger and possible ways of eliminating or minimizing these risks. To avoid accidental discharges the circuit will be provided with a disconnection system in order to avoid cramping. Also, for this reason, the electrical elements will be hidden and will be difficult to access and open.

2.5. Environmental requirements.

A documented statement will be submitted stating that the products supplied do not contain lead, mercury, cadmium, chromium or other highly toxic or dangerous materials.

A document will be presented on how the different materials must be recycled once they have passed their useful life. It is the owner who is responsible for the recycling of unteachable materials.



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In the case of batteries, they must be transported to specialized centers for the treatment of hazardous waste.

2.7. Delivery conditions.

There will be delivery of:

- Set of set planes, with corresponding views.
- List of elements and commercial references and technical characteristics
- Schematics and mounting drawings
- Certificate of approval and CE conformity
- Preventative maintenance file
- Basic instructions manual, and maintenance and handling tips.

2.8. Guarantee

In general, a 2-year warranty is given in pieces. The vendor ensures the existence of spare parts during the service life of the car park. In case this supply is not possible, documentation will be submitted in order to reproduce.

In the case of the components, the same guarantee as the one offered by the respective manufacturers is given.

In the case of the appearance of construction defects within the warranty period, the responsibility is the supplier, and undertakes to solve it without any charge to the customer, modifying if necessary, rhythms or production schedules in order to satisfy the customer.



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In case of replacement of any part or component, it will have a 6-month warranty, requiring the provider of the occasional damage that could be generated.

The provider offers a technical support service to customers for 6 months.

The technical assistance costs are borne by the supplier during the warranty period, as long as the breakdowns are attributable to manufacture.

Chapter 3. Technical conditions and regulation that must be complied

3.1 Materials

- Safety screws must be made of stainless steel with M5-1x30 mm, according to the UNE-EN ISO 3506-1: 2010.
- The perforated angle must be of galvanized stainless steel of 100x35x35 mm according to UNE-EN 10088.
- The bolts for the subjection of the angles must be made of stainless steel of M8-1x20 mm, according to UNE-EN 14219: 2004 standard. The females follow the ISO 4032 standard.

3.2 Power system

- The battery must work at a voltage of 12 V and have a capacity of 75 A · h and a maximum weight of 28 kg, as well as maximum dimensions of 330x171x236 mm according to the norm UNE-EN 50342-2: 2008.



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- The solar plate must work at a voltage of 12 V / 24 V and have a power of 400 W and a maximum weight of 35 kg, as well as maximum dimensions of 1690x1046x40 mm according to the UNE-CLC / TS 50625-3-5 standard: 2017.

Chapter 4. Student version

In this point I want to say that this project is only a student version and it's not done for a professional in this section is for that reason that this manual or project is not valid to build it before a supervision of an expert.