

1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 2 en
ENAE0208 MONTAJE Y MANTENIMIENTO DE INSTALACIONES SOLARES TÉRMICAS

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 2 in
ENAE0208 INSTALLATION AND MAINTENANCE OF THERMAL SOLAR SYSTEMS
(This translation has no legal status)

3. PROFILE OF SKILLS AND COMPETENCES

The holder of this certificate will have acquired the **general competence** to carry out the installation, commissioning, operation and maintenance of thermal solar systems with the quality and safety required and complying with current law. This general competence is divided into the following **skills units** (UC):

- Prepare the on-site layout of thermal solar systems (UC0601_2).
- Install water collectors, equipment and circuits in thermal solar systems (UC0602_2).
- Install electrical circuits and equipment in thermal solar systems (UC0603_2).
- Commission and operate thermal solar systems (UC0604_2).
- Carry out maintenance on thermal solar systems (UC0605_2).

The professional skills are acquired through the **learning outcomes** defined within the related Training Modules (MF):

- On-site layout of thermal solar systems (MDF0601_2).
- Mechanical and water system installation in thermal solar systems (MF0602_2).
- Electrical installation in thermal solar systems (MDF0603_2).
- Commissioning and operation of thermal solar systems (MF0604_2).
- Maintenance of thermal solar systems (MDF0605_2).
- Practical training at the workplace in the installation and maintenance of thermal solar systems (MP0043)

(See legal basis for all learning outcomes information acquired by the holder of this Certificate in each MF).

As a reference the learning outcomes include in the Practical training at the workplace that complete and reinforce the learning outcomes acquired in the other training modules, are:

- Interpret the project designs of a thermal solar system to carry out the operation of on-site layout and others related to its installation.
- Collaborate on the operations of organisation and mechanical and water-system installation of a thermal solar system that contains at least two collectors, two circuits, a heat exchanger, sanitary hot water accumulator and a support facility, based on technical documentation and in accordance with established working procedures.
- Collaborate on the operations of organisation and assembly of the electrical circuits and equipment for a thermal solar system that contains at least two collectors, two circuits, a heat exchanger, sanitary hot water accumulator and a support facility, based on technical documentation and in accordance with established working procedures.
- Collaborate on the operations for checking before the commissioning of the thermal solar systems.
- Collaborate on commissioning operations of a thermal solar system that contains at least two collectors, two circuits, a heat exchanger, a sanitary hot water accumulator and a support facility.
- Collaborate on preventive maintenance operations for a thermal solar system that contains at least two collectors, two circuits, a heat exchanger, a sanitary hot water accumulator and a support facility.
- Collaborate on corrective maintenance operations of thermal solar systems.
- Take part in the company's working processes, following the rules and instructions established at the workplace.

4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THIS CERTIFICATE

The holder of this certificate may work in companies dedicated to the installation, operation and maintenance of thermal solar systems for the production of sanitary hot water or for support to heating systems and other uses *under the supervision of heating installations in buildings professional installer*. The holder may work in the energy sector, in the sub-sector of renewable energies. The most pertinent occupations and positions are:

- Alternative energy system technician.
- Solar energy piping installer.
- Solar energy panel installer.
- Thermal solar system assembler.
- Thermal solar energy system installer.
- Thermal solar system maintenance worker.

The holder of this professional certificate has recognition of the basic level training in labour risk prevention, according to Annex IV of the Royal Decree 39/1997 of 17 of January approving the Labour Risks Prevention Act.

5. OFFICIAL BASIS OF THE CERTIFICATE

Name and status of the national/regional authority providing accreditation/recognition of the certificate

The Ministry of Employment and Social Security or the corresponding autonomous regional administration within the scope of its competence, in the name of the King. The certificate is valid throughout Spain.

Level of the certificate

The Professional Certificate Level 2 of the National Repertoire of Professional Certificates corresponds to level 3 of the International Standard Classification of Education (ISCED-P 2011).

The European Qualification Framework (EQF) level:

Grading scale/Pass requirements

The grading scale and pass level of the training modules are expressed on a scale of 0 to 10. The minimum score for a pass is 5 in every training module including a pass in the practical training at the workplace module.

The grading system is as follows:

- FAIL: 0 to 4.9
- PASS-SATISFACTORY: 5 to 6.9
- PASS-GOOD: 7 to 8.9
- PASS-EXCELLENT: 9 to 10

Access to next level of education/training

This Professional Certificate Level 2 gives access to Professional Certificate Level 3 within the same professional area and family.

For validation purposes, the educational authorities will recognise the professional module or modules of the VET diplomas corresponding to the skills units included in the training modules of this certificate.

Legal basis

Royal Decree 1967/2008 of 28 November, establishing four professional certificates in the professional family Energy and Water, which are included in the National Repertoire of Professional Certificates. (Appendix I, Code: ENAE0208).

Modified by Royal Decree 617/2013 of 2 August, establishing one professional certificates in the professional family Energy and water, which are included in the National Repertoire of Professional Certificates, and updating the professional certificates established as Appendix I, of Royal Decree 1967/2008 of 28 of November and Appendix I of the Royal Decree 1381/2008 of 1st of August.

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

This certificate may be acquired by:

1. Training: Completion with a pass grade of the face-to-face or online training programme.
2. Recognition of the professional skills acquired through professional experience or non-formal training (prior learning): Completion of a process of skills evaluation and accreditation in all the skills units making up the professional certificate.
3. Dual training: Completion of a training and apprenticeship contract, which may range from 1 year (or 6 months, if stipulated as such in the collective agreement) to 3 years, during which effective working time is combined with time dedicated to training under the training programme for the professional certificate.

The training method (number 1 above) requires successful completion of the training modules and the practical training at the workplace:

Description of vocational training received	Percentage of total programme (%)	Duration (hours)
Training modules	72	420
Practical training at the workplace	28	160
Total duration of training leading to the certificate		580

Entry/access requirements:

- Compulsory Secondary Education Diploma (Lower secondary education); or
- Professional Certificate Level 1 in the same professional area.
- If neither of the above or higher certifications are held, a pass in the key skills tests.

Additional information: Professional certificates are instruments for official accreditation of the professional qualifications in the National Catalogue of Professional Qualifications for all economic activities, within the scope of the labour administration. The National Repertoire of Professional Certificates is divided into three qualification levels (Level 1, Level 2 and Level 3), and by sectors into 26 professional families and 102 professional areas. More information is available at: www.sepe.es

National Europass Centre: www.oapee.es

(*) **Explanatory note:** This document is designed to provide additional information about the specified certificate, but has no legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications; Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates; and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: <http://europass.cedefop.eu.int>

Information on Professional Certificates of the Map of Qualifications and Vocational Training in Spain

