

# EUROPASS CERTIFICATE SUPPLEMENT

## TITLE OF THE DIPLOMA (ES)

*Técnico en Mecanizado*

## TRANSLATED TITLE OF THE DIPLOMA (EN)<sup>(1)</sup>

*Technician in Machining*

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(1) This translation has no legal status.

## DIPLOMA DESCRIPTION

**The holder of this diploma will have acquired the General Competence with regard to:**

Carrying out the machining processes through stock removal, shaping and special procedures; preparing, programming, operating machine tools and verifying the products obtained, in compliance with specifications on quality, safety and environmental protection.

**Within this framework, the PROFESSIONAL MODULES and their respective LEARNING OUTCOMES acquired by the holder are listed below:**

### “Machining Processes”

The holder:

- Selects the material to machine, relating its technical and commercial characteristics with the specifications of the product to be obtained.
- Selects machinery and means used in machining through the analysis of the characteristics of the final product.
- Determines machining processes analysing and justifying the control sequence and variables in each stage.
- Determines the cost of operations identifying and calculating the machining times.

### “Machining With Computer Numerical Controlled Machine Tools”

The holder:

- Prepares the programmes of numerical control, analysing and applying the different types of programming.
- Organises his/her tasks during the machining process, analysing the process sheets and preparing the necessary documentation.
- Prepares computer numerical controlled (CNC) machines, selecting tools and applying the required techniques or procedures.
- Monitors the machining process, relating the way the numerical control programme works with the characteristics of the final process.

### “Manufacture Through Abrasion, Electrical Discharge Machining, Cutting and Shaping and Special Procedures”

The holder:

- Organises his/her tasks during the machining process, analysing the process sheets and preparing the necessary documentation.
- Prepares machinery for abrasion, electrical discharge and special procedures, as well as bodywork shape and cutting machinery, equipment and tools, selecting tools and applying the required techniques and procedures.
- Operates machinery for abrasion, electrical discharge and special procedures, as well as bodywork shape cutting machinery, relating the way they work with the conditions of the process and the characteristics of the final process.
- Carries out the first-level maintenance of machinery and tools relating the same with its functionality.
- Complies with the rules on labour risk prevention and environmental protection, identifying associated risks and measures and equipment to prevent them.

### “Manufacture Through Stock Removal”

The holder:

- Organises his/her tasks during the machining process, analysing the process sheets and preparing the necessary documentation.
- Prepares stock removal machinery selecting tools and applying the required techniques or procedures.
- Operates stock removal machinery, relating the way they work with the conditions of the process and the characteristics of the final product.
- Carries out the first-level maintenance of machinery and tools relating it with its functionality.

- Complies with the rules on labour risk prevention and environmental protection, identifying associated risks and measures and equipment to prevent them.

### **“Automated Systems”**

The holder:

- Specifies the auxiliary operations of automation, relating the manufacturing processes with their needs of supply, transport, handling and storage.
- Adapts programmes for automatic systems relating the way they work with the goals of each stage.
- Monitors automatic systems responses, analysing and adjusting the parameters of the system variables.
- Carries out the first-level maintenance of automated systems, relating it with the functionality of the system.

### **“Metrology and Tests”**

The holder:

- Prepares instruments, checking equipment and destructive and non-destructive testing equipment, selecting tools and applying the required techniques or procedures.
- Controls dimensions, geometry and surface of products, calculating measurements and comparing them with the specifications of the product.
- Detects deviations in automatic processes, analysing and interpreting the graphics of process controls.
- Controls characteristics and properties of the manufactured product, calculating the value of the parameter and comparing results with the specifications of the product.
- Acts in accordance with quality procedures and regulations in association with the competences of the professional profile, relating them with quality systems and models.

### **“Graphical Interpretation”**

The holder:

- Recognises the forms and characteristics of the products to be manufactured, analysing and interpreting the technical information included in the manufacturing plans.
- Determines the characteristics of the products to be manufactured, interpreting the symbols represented in the manufacturing plans.
- Represents tools in the making processes, defining and sketching the constructive solutions in each case.
- Interprets sketches of machine and equipment automation, identifying and relating the represented elements in pneumatic, hydraulic, electric, programmable and non programmable installations.

### **“Professional Training and Guidance”**

The holder:

- Selects job opportunities, identifying the different possibilities of labour integration, and the alternatives of lifelong learning.
- Applies teamwork strategies, assessing their effectiveness and efficiency on the achievement of the company's goals.
- Exercises rights and complies with the duties derived from labour relationships, recognising them in the different job contracts.
- Determines the protective action of the Spanish Health Service in view of the different covered eventualities, identifying the different types of assistance.
- Assesses risks derived from his/her activity, analysing job conditions and risk factors present in his/her labour setting.
- Participates in the development of a risk prevention plan in a small enterprise, identifying the responsibilities of all agents involved.
- Applies protection and prevention measures, analysing risk situations in the labour setting of the Technician in Machining.

### **“Business and Entrepreneurial Initiative”**

The holder:

- Recognises skills related to entrepreneurial initiative, analysing the requirements derived from job positions and business activities.
- Defines the opportunity of creating a small enterprise, assessing the impact on the performance setting and incorporating ethic values.
- Carries out the activities for the setting-up and implementation of a company, choosing the legal structure and identifying the associated legal obligations.
- Carries out basic administrative and financial management activities of an SME, identifying the main accounting and tax obligations and filling in documentation.

### **“On the Job Training”**

The holder:

- Identifies the company's structure and organization relating it to service provision.

- Applies labour and ethic habits in his/her professional activity according to the characteristics of the job position and the procedures established by the company.
- Defines the machining work procedure to be carried out, interpreting the technical specifications and describing the necessary stages, operations and means.
- Prepares machines and systems assembling and regulating tools, parts and equipment, in accordance with the established procedures, applying the rules on labour risk prevention and environmental protection.
- Carries out machining operations in accordance with manufacture specifications, applying the rules on labour risk prevention and environmental protection.
- Verifies dimensions and characteristics of manufactured pieces, following the established instructions in the control plan.

### **RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE DIPLOMA**

The Technician in Machining works in the metal transforming industries related with the sub-sectors in charge of manufacturing mechanical equipment and machinery; electrical, electronic and optical material and equipment; and transport material within the industrial sector.

The most relevant occupations or jobs are the following:

- Machine tool fitter
- Metal polisher and tool sharpener
- Metal working machines operator
- Machine tool operator
- Industrial robots operator
- Tool maker, machinists and fitters, mould makers and the like.
- Turning machine operator. Miller. Boring machine operator

### **AWARD, ACCREDITATION AND LEVEL OF THE DIPLOMA**

**Name of the body awarding the diploma on behalf of the King of Spain:** Spanish Ministry of Education or the different Autonomous Communities according to their areas of competence. The title has academic and professional validity throughout Spain.

**Official duration of the education/ training leading to the diploma:** 2000 hours.

#### **Level of the diploma (national or international)**

- NATIONAL: Post-Compulsory Secondary Education
- INTERNATIONAL:
  - Level 3 of the International Standard Classification of Education (ISCED3).
  - Level \_\_\_\_\_ of the European Qualifications Framework (EQF\_\_).

**Entry requirements:** Holding the Certificate in Compulsory Secondary Education or holding the corresponding access test.

**Access to next level of education/training:** This diploma may provide access to Higher Technical Cycles provided that an entrance exam is passed.

**Legal basis.** Basic regulation according to which the diploma is established:

- Minimum teaching requirements established by the State: Royal Decree 1398/2007, of 29 October, according to which the diploma of Technician in Machining and its corresponding minimum teaching requirements are established.

**Explanatory note:** This document is designed to provide additional information about the specified diploma and does not have any legal status in itself. An Annex I may be added and will be filled in by the corresponding Autonomous Community.

INFORMATION ON THE EDUCATION SYSTEM

