

**STRUCTURE OF JOB COMPETENCY DESCRIPTION (JCD) OF
INSTALLER OF PERMANENT ANCHORING SYSTEMS ON ROOFTOPS**

1. Name of JCD	Installer of permanent anchoring systems on rooftops
2. Economic sector, position	Construction, safety
3. Level of JCD (also in accordance with NQF)	It is presumed that the guiding level of autonomy and required responsibility, as indicated in the QNQ classification (Recommendation 2017/C189/03, Annex II), is: <u>installer level 3</u>
4. Description of JCD	<p>Knowledge: (what the installer knows and understands)</p> <p><u>Activity planning:</u></p> <ol style="list-style-type: none"> 1. Current national and/or regional legislation, technical standards. 2. Organization, logistics, and functioning of the construction site. <p><u>Workplace and/or construction site organization:</u></p> <ol style="list-style-type: none"> 1. Current national and/or regional legislation, technical standards. 2. Techniques and methods for setting up and dismantling temporary equipment. 3. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work. 4. Organization, logistics, and functioning of the construction site. 5. Knowledge of storage requirements specified by material manufacturers. 6. Techniques and methods for cleaning tools/instruments. <p><u>Inspection of the support structure:</u></p> <ol style="list-style-type: none"> 1. Current national and/or regional legislation, technical standards. 2. Types and characteristics of materials used. 3. Techniques for carrying out restoration operations. 4. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work. 5. Technical data sheets and manuals of materials/products to be used, including relevant terminology. <p><u>Installation of the anchoring system according to the specificities of the roof:</u></p> <ol style="list-style-type: none"> 1. Current national and/or regional legislation, technical standards. 2. Types and characteristics of materials used. 3. Installation techniques and related equipment. 4. Technical data sheets and manuals of materials/products to be used, including relevant terminology. 5. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work. 6. Behavior of materials when exposed to weather conditions and the passage of time. <p><u>Replacement/restoration of the anchoring system:</u></p> <ol style="list-style-type: none"> 1. Current national and/or regional legislation, technical standards. 2. Properties of the materials.



3. Installation techniques and related equipment.
4. Technical data sheets and manuals of materials/products to be used, including relevant terminology.
5. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work.
6. Behavior of materials when exposed to weather conditions and the passage of time.

Inspection during the installation of the anchoring system

1. Current national and/or regional legislation, technical standards.
2. Properties of the materials.
3. Installation techniques and related equipment.
4. Technical data sheets and manuals of materials/products to be used, including relevant terminology.
5. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work.
6. Behavior of materials when exposed to weather conditions and the passage of time.

Periodic inspection of the anchoring system:

1. Compliance with current national and/or regional legislation, technical standards.
2. Properties of the materials.
3. Installation techniques and related equipment.
4. Technical data sheets and manuals of materials/products to be used, including relevant terminology.
5. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work.
6. Behavior of materials when exposed to weather conditions and the passage of time.

Extraordinary inspection of the anchoring system:

1. Compliance with current national and/or regional legislation, technical standards.
2. Properties of the materials.
3. Installation techniques and related equipment.
4. Technical data sheets and manuals of materials/products to be used, including relevant terminology.
5. Principles, mechanisms, and parameters for operating and maintaining tools, equipment, and machinery required for the work.
6. Behavior of materials when exposed to weather conditions and the passage of time.

Skills: (what the installer can do)

Activity planning:

1. Identify the issues and challenges.
2. Identify and organize the necessary equipment.
3. Understand the project requirements and specifications.
4. Identify the major project constraints and challenges related to the installation site.

Organization of the work site and/or construction site:

Implement solutions that make use of tools, equipment, and machinery for the



installation of the anchoring system according to the specific requirements of the work site and/or construction site (e.g., roof).

Control of the support structure:

1. Analyze the information provided in the manuals and technical data sheets of the materials/products used.
2. Verify the adequacy of the support structure.
3. Provide instructions for any necessary adjustments or modifications to the support structure, if required.

Installation of the anchoring system according to the specificities of the roof:

1. Identify possible product anomalies (such as damages and defects).
2. Verify the adequacy of the anchoring system in relation to the support structure.
3. Verify the suitability of the components, elements, and accessories to be used for the installation of the anchoring system according to the specific requirements of the installation area, design specifications, and information provided in the data sheets and manuals.
4. Identify and use tools, equipment, and machinery for the installation of the anchoring system based on the specificities of the installation area.
5. Install the anchoring system in accordance with the project and the instructions provided in the manufacturer's manual.

Replacement/restoration of the anchoring system:

1. Identify possible product anomalies (such as damages and defects).
2. Verify the adequacy of the anchoring system in relation to the support structure.
3. Verify the suitability of the components, elements, and accessories to be used for the installation of the anchoring system according to the specific requirements of the installation area, design specifications, and information provided in the data sheets and manuals.
4. Identify and use tools, equipment, and machinery for the installation of the anchoring system based on the specificities of the installation area.
5. Install the anchoring system in accordance with the project and the instructions provided in the manufacturer's manual.

Inspection during the installation of the anchoring system:

1. Identify and use tools, equipment, and machinery for the installation of the anchoring system based on the specificities of the installation area.
2. Identify and use tools, equipment, and machinery for the characterization tests of the support structure.
3. Verify the proper installation of the anchoring system and its functionality.
4. Complete the necessary documentation within one's competence.

Periodic inspection of the anchoring system:

1. Identify and use tools, equipment, and machinery for the installation of the anchoring system based on the specificities of the installation area.
2. Identify and use tools, equipment, and machinery for the characterization tests of the support structure.
3. Verify the proper installation of the anchoring system and its functionality.
4. Verify that the anchoring system has maintained its initial performance



characteristics.

5. Complete the necessary documentation within one's competence.

Extraordinary inspection of the anchoring system:

1. Identify and use tools, equipment, and machinery for the installation of the anchoring system based on the specificities of the installation area.
2. Identify and use tools, equipment, and machinery for the characterization tests of the support structure.
3. Verify the proper installation of the anchoring system and its functionality.
4. Verify that the anchoring system has maintained its initial performance characteristics.
5. Identify and replace any damaged components with similar characteristics and performance.
6. Verify that the support structure at the location of the damaged component has maintained its initial performance characteristics.
7. Complete the necessary documentation within one's competence.

Social competences: (attitudes, characteristics, values represented by a person, willingness to perform specific tasks and fulfill specific obligations; ability to shape one's own development and participate autonomously and responsibly in professional and social life. The ethical context of one's conduct is taken into account).

1. Planning and organizational skills.
2. Ability to concentrate and divide attention.
3. Resilience to stress and time pressure.
4. Openness and communicativeness.
5. Discipline.
6. Commitment and responsibility for assigned professional tasks.
7. Precision, conscientiousness, and reliable execution of assigned professional tasks.
8. Willingness to exercise due diligence in performing professional activities.
9. Proper care for the workplace, tools, and materials.
10. Observance of professional confidentiality.
11. Availability.
12. Willingness to follow received instructions, orders, and advice.
13. Willingness to collaborate during professional activities.
14. Readiness to adhere to ethical standards and cultural principles applicable.
15. Willingness to act in accordance with the employer's established norms and procedures for professional activities - observing work discipline rules.
16. Readiness to consider the immediate and foreseeable long-term effects of one's work performance.
17. Readiness to communicate in the work environment in the following manner:
 - Not interfering with the flow of information related to professional tasks being performed.



	<ul style="list-style-type: none"> • Ensuring flexibility in communication with clients and fostering good cooperation within the team, such as placing orders, directly contacting drivers, and assisting them in resolving simple/moderately complex problems related to order execution. <p>18. Readiness to establish and maintain contacts with clients.</p> <p>19. Willingness to integrate and deepen professional competences within the scope of assigned tasks.</p>
<p>5. Requirements to obtain JCD (If applicable, requirements for completed education and/or training, duration of employment, skills, etc.)</p>	<p><u>Definition:</u></p> <p>Formal learning: Learning that takes place within the education and training system, universities, and higher education institutions in the fields of arts, music, and dance, and which culminates in the attainment of a degree, qualification, professional diploma, obtained also through apprenticeship, or a recognized certification, in accordance with the current legislation regarding school and university systems.</p> <p>Informal learning: Learning that occurs, regardless of intentional choice, through the performance of activities by individuals in everyday life situations and the interactions that take place within them, within the contexts of work, family, and leisure.</p> <p>Non-formal learning: Learning characterized by intentional choice on the part of the individual, which takes place outside the systems associated with formal learning, within any organization that pursues educational and training purposes, including voluntary organizations, national civil service, social enterprises, and businesses.</p> <p><u>Requirements to obtain JCD for the installer:</u></p> <p>Case A (without formal learning requirements):</p> <ul style="list-style-type: none"> • Requirements related to non-formal learning: Completion of a 40-hour training course, including 20 hours of theory and 20 hours of practice. • 15 installations of permanent anchoring systems + 2 years of experience in the construction or metalworking sector. <p>Caso B (with formal learning requirements):</p> <ul style="list-style-type: none"> • Formal learning requirements: Middle school diploma or equivalent. • Requirements related to non-formal learning: Completion of a 32-hour training course, including 16 hours of theory and 16 hours of practice. • 15 installations of permanent anchoring systems.
<p>6. Methods to obtain JCD</p>	<p>Methods to achieve learning outcomes:</p> <p>Through formal education (school, university): The achievement of learning outcomes is confirmed by obtaining an appropriate diploma that attests to their completion.</p>



	<p>Through non-formal education: Professional courses, training in the field of construction and in the field of improving so-called "soft skills" (relationship building, negotiation techniques, marketing techniques).</p> <p>Through informal learning: Independent learning, acquiring specific knowledge and skills during the execution of professional tasks.</p> <p>Assistance/support from a professional consultant/mentor: In diagnosing achieved learning outcomes, identifying competency gaps, finding ways to overcome them, and assisting the employee in planning their professional development.</p>
<p>7. Criteria for assessing the competencies that make up the JCD (eg. statements illustrating the acquisition of the JCD)</p>	<p>Verification/evaluation of learning outcomes (knowledge, skills, and social competencies) required to perform simple/non-too complex professional tasks in the workplace includes five sets of learning outcomes.</p> <ol style="list-style-type: none"> 1) Planning activities CRITERIA: <ul style="list-style-type: none"> a) Conducts site inspections and assesses the consistency of the project with the site conditions and its feasibility. b) Collaborates by providing all relevant information for the preparation of the necessary documentation. 2) Organization of the workplace and/or construction site CRITERIA: <ul style="list-style-type: none"> a) Ensures that the preliminary safety conditions necessary for their activity are in place, in accordance with the documentation. b) Prepares/ensures the availability of any temporary equipment (such as temporary guardrails and safety nets) required for the installation of anchoring systems. c) Arranges/verifies spaces for storing materials and equipment. d) Indicates/verifies access routes, transit paths, and restricted areas. e) Performs/verifies the cleanliness of the working areas upon completion of work. f) Selects/verifies proper waste disposal methods. 3) Control of the support structure CRITERIA: <ul style="list-style-type: none"> a) Analyses the type of support structure and identifies appropriate solutions to comply with the design specifications, including any necessary adjustments, for the proper installation of the anchoring system (e.g., removal of insulation layer to access the support structure/flooring). 4) Installation of the anchoring system according to the specificities of the roof CRITERIA: <ul style="list-style-type: none"> a) Checks the consistency of the design specifications with the actual



	<p>installation conditions.</p> <p>b) Reviews the technical data sheets and manufacturer's manual for the anchoring system.</p> <p>c) Procures the necessary materials for the proper installation of the anchoring system based on the design specifications.</p> <p>d) Procures and uses the equipment, tools, and/or machinery according to the instructions provided in the technical data sheets and/or manuals.</p> <p>e) Installs the anchoring system.</p> <p>f) Records and documents the assembly stages photographically, paying attention when the fastening system is not visible.</p> <p>g) Records and documents photographically any variations, agreed upon with the designer, from the original design specifications.</p> <p>h) Performs/verifies the cleaning of the work areas upon completion.</p> <p>i) Selects/verifies the proper waste disposal methods.</p> <p>5) Inspection during the installation of the anchoring system</p> <p>CRITERIA:</p> <p>a) Checks the documentation of the anchoring system before installation, ensuring that the following are available:</p> <ul style="list-style-type: none">• Representative graphical drawing of the system• General technical report• Structural calculation report• Installation, use, and maintenance manuals for the anchorages• Declaration of conformity/compliance of the anchorages. <p>b) Checks the documentation of the anchoring system after installation, ensuring that the following are available:</p> <ul style="list-style-type: none">• Photographic documentation of the system• Declaration of proper installation of the system• Indication of the PPE to be used• System maintenance program• Record of inspections/maintenance of the system• Record of access to the system.
<p>8. Methods for assessing the competencies comprising the JCD</p>	<ol style="list-style-type: none">1. Analysis of the curriculum vitae supplemented by supporting documentation of the candidate's work and educational activities.2. Written examination to assess knowledge. This exam should include:<ul style="list-style-type: none">• Multiple-choice questions: For example, for each question, several options are provided, and the candidate must select the correct one (excluding true/false type questions).• Open-ended questions: For example, the candidate is required to provide a detailed and appropriate response for each question.3. Oral examination: Necessary to further explore any uncertainties identified in the written tests and/or to assess the depth of knowledge acquired by the candidate.4. Practical tests in operational situations relevant to the reality of the professional activity: These tests can be conducted through direct observation, during the candidate's work activity. This method can be used to assess skills and competencies, including personal abilities. The

	<p>practical tests should include at least one installation task.</p>
<p>9. Opportunities for employment and career for a person who has acquired a JCD</p>	<p>The installation of safety and fall protection systems on buildings is becoming increasingly widespread for two main reasons:</p> <ul style="list-style-type: none"> - The high incidence of serious or fatal accidents caused by simple falls from heights, which can be prevented through the installation and use of anchoring and fall protection systems that are in high demand. - The growing presence of photovoltaic systems and technological equipment on building rooftops, which require the presence of anchoring systems for maintenance purposes. <p>The demand for installers and competent personnel in this field is therefore increasing. The employment and career opportunities for a person who has acquired the JCDs (Job Competence Descriptions) are as follows:</p> <p>Employment Areas:</p> <ul style="list-style-type: none"> - Within the field of anchoring systems (anchors, lifelines, guardrails, safety stairs, etc.), as an employee of installation companies or companies operating in the construction industry. <p>Career Paths:</p> <ul style="list-style-type: none"> - From a general construction worker to a specialist in the installation of anchoring systems (installation operator), to a team leader and installation supervisor. The career progression depends on the acquired experience and the opportunities provided by the employing company. - Those who have acquired a JCD can also work as self-employed individuals with expertise in the installation of anchoring and fall protection systems. <p>In the construction sector, individuals who possess these skills have a higher level of safety training for work at heights. They are more attentive and aware of risks, making them less prone to accidents and contributing to a safer working environment for the entire team.</p>

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.