



Mapping – Basic Professional in Housing Maintenance (Spain)

Translated title of the training programme	Basic Professional in Housing Maintenance					
Brief explanation of the professional fields of activity	This professional carries out his activity as an employee in large, medium and small companies dedicated to the manufacture and assembly of mechanical and electromechanical products, as well as the assembly and maintenance of plumbing, heating and air conditioning installations.					
Certificate (incl. EQF-level)	EQF 3; The training established in the degree, in its different professional modules, guarantees the basic level of knowledge required in the professional plumbing license					
Entry requirements	Basic degree training cycles. Simultaneous requirements: a) Be 15 years old, or turn fifteen during the current calendar year. b) Having completed the third year of Compulsory Secondary Education or, exceptionally, having completed the second year of Compulsory Secondary Education. c) The teaching team has proposed to the families or legal guardians the incorporation of the interested person into a basic degree training cycle. For those people between 15 and 18 years old who have not been educated in the Spanish educational system, they are exempt from compliance with section b), being important the knowledge of the language that allows them to follow the training.					
Access to next level of education / VET-training	A mid-level training cycle (This degree will have preference for admission to all mid-level degrees in the professional families of Installation and Maintenance, Building and Civil Works, Electricity and Electronics, and Carpentry and Furniture)					





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Notes on using the matrix (Glossary)

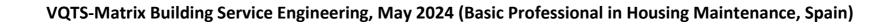
The competence matrix for the field of Building Service Engineering is the result of a pan-European empirical study of operational practice. From this, a total of 10 core work processes were identified on the vertical axis and the competences required for these were described as units of learning outcomes. The entire matrix relates to EQF levels 3 - 6. The level of requirement of the matrix increases horizontally and, with regard to core work processes 1 to 7, also vertically. Core work processes 1 to 7 relate to classic core competences in Building Service Engineering. Core work processes 8 to 10, on the other hand, are to be understood more as cross-activity areas of expertise that are particularly important for adaptation processes in the context of interdisciplinary cooperation. The units in the matrix are formulated in general terms and can therefore be related to different occupational fields that have cross-sectional competences in Building Service Engineering.

The definitions and explanations below will help you to identify the competencies of the various occupational fields

Building systems tech- nology	Building systems technology encompasses all the technology required to operate a building. This includes construction technology, sanitation, heating and air conditioning, electrical engineering, information technology and security technology.
Building systems	Building systems include all technical components of a building for the supply of heat, air, light, water, energy and information, the disposal of wastewater and exhaust air as well as all associated processes. The term building system must be replaced accordingly for an individual building systems technology trade (e.g. electrical engineering or sanitation, heating, and air conditioning). e.g.: Electrical engineering: the entire power supply of a building. Heating technology: the entire heating system of a building.
Components of build- ing systems	Components of building systems include single technically relevant elements of a building. e.g.: Electrical engineering: PV modules as a component of the entire electrical energy supply. Heating technology: A heat pump as a component of a building's entire heating system.
Building system pro- cesses	In terms of facility management, building system processes include all technical and service-related processes regarding planning, construction, operation and dismantling of a building. (e.g. switch-on times of lighting, ventilation, and air conditioning systems, cleaning intervals, presence times, energy flows, operating times of monitoring equipment)







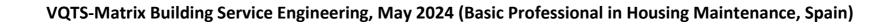




	Competence areas Core working process	Steps of competence development:							
1	Assembly, disassembly and disposal of building systems and their components	He/she can assemble and disassemble components of building systems according to existing assembly and installation plans and in compliance with applicable standards, regulations, and laws. He/she can professionally separate components and building materials while the disposal of building systems.		He/she can plan and docur and disassembly of componitems according to custome in coordination with authori system manufacturers, coquirements. He/she can dispose of the prated components and bubuilding systems in accordate lations. He/she can estimate worklosible problems to superiors.	tling and disposal or their componer tion and the curre tion and the curre He/she can use p targeted manner. To fessionally sepading materials of ce with legal regu-		e and adapt assembly, disman- concepts for building systems ts regarding process optimiza- nt legal situation. Toject management tools in a	tion, di tems oi custom	can develop new concepts for installa- smantling and disposal of building sys- r their components in cooperation with ers, authorities, and manufacturers of g systems technology.
2	Maintain building systems or their components	He/she can operate components of building systems according to specifications and check their function.		He/she can carry out and document inspection, maintenance, and repair work on components of building systems according to the manufacturer's instructions.		He/she can carry out complex inspection, maintenance and repair work on building systems and prepare documentation.		He/she can create maintenance concepts for building systems considering manufacturer specifications and economic aspects as well as applicable regulations and standards. He/she can create deployment and work plans and determine the team's human and material resources. He/she can use project management tools in a targeted manner.	
3	Commissioning of building systems or their components	He/she can commission technical building components according to specifications and customer requirements.	building in accord ments a and test the applications. He/she codefects a	can commission technical systems and configure them lance with customer requirend prepare documentation reports in compliance with cable standards and specifican recognize and document and conflicting objectives durnissioning.	He/she can com technical building sure them in accordination tomer requirement pare documentation compliance with ards and specificat. He/she can recogn defects and conflicting commissioning in coordination with	ystems and config- ordance with cus- ts as well as pre- on and test reports a applicable stand- ions. Size and document ting objectives dur- and resolve them	He/she can commission the building systems technology pliance with applicable standar specifications.	in com-	He/she can hand over complex technical building systems or the entire building system technology to the operator, including the associated documentation, instruct him/her in its use and inform him/her of the operator's responsibilities.











	Competence areas Core working process	Steps of competence development:							
4	Monitoring, control and optimization of building system pro- cesses through build- ing automation	He/she can operate simple building automation systems according to specifications and guidelines and further check system statuses to ensure a stable operating status.	occur in b	an interpret data when faults building systems, initiate properties or rectify faults according to a and document this.	He/she can independent solution strategies faults occurring in the systems and initiate tation.	in the event of technical building	He/she can analyze the op- conditions of complex buildin tems, carry out optimization document changes.	ng sys-	He/she can develop, document, and implement concepts for optimizing the economy and ecology of building system processes by analyzing building automation data.
5	Conception of building systems, their components and the associated processes	He/she can recognize, structure, and specify the requirements for building systems from customer orders and convert them into a user profile, considering applicable regulations, standards, and laws. He/she can create a concept for the requirements for building systems from user profiles.	He/she can dimension and select components of building systems according to the concepts created from the user profiles in compliance with regulations and guidelines.		He/she can plan building system prod facility management. He/she can prepare determine costs for management of buil specify service tasks pile associated statis	teesses in terms of t. e technical data, the operation and dings and further is as well as com-	of data for the documentation of erty operation and prepare data for the management of ings. nd er		He/she can prepare tender documents based on applicable legal requirements and the user profile. He/she can determine optimization potentials regarding economy and ecology for existing systems and new systems, and further create corresponding concepts and advise customers in this regard.
6	Identification, implementation, and review of legal requirements for the operation of a building system	He/she can carry out and document activities to maintain operation regarding legal requirements for a building system or its components as specified.	He/she can identify the legal requirements for the operation of a building system based on regulations and further implement and document them through organizational measures. He/she can carry out a safety briefing.		He/she can independently create test protocols and work plans based on legal requirements.		He/she can prepare a hazard assessment (risk analysis). He/she can take the risk analysis into account when organizing the operation of a building system and when planning personnel deployment.		He/she can create and optimize a guide- line for the implementation of legal re- quirements, draw conclusions about their effectiveness and take them into account in future planning processes.
7	Cost control and monitoring for the life cycle of a building system	He/she can determine and document for tracking cost of building systems ance with guidelines.			•	He/she can evaluate key figures of building systems and analyze them to identify optimization potentials.			e can implement the identified optimiza- otentials and ensure their effectiveness.
8	Communication across trades, also in foreign languages	He/she can understand basic technical terms of his/her own and other trades. He/she can conduct conversations with superiors and employees of his/her own and other trades and customers in an appropriate manner while presenting and explaining facts. He/she can read product data sheets and carry out assembly and operating instructions of his/her own and other trades. He/she can communicate with non-specialist trades with the help of translation aids.		He/she can understand and from his/her own and other He/she can conduct discus and employees of his/her o and customers and resolve ately. He/she can obtain and evaloperating instructions as we sheets for all trades.	coordination me from all trades a ssions with superiors own and other trades e conflicts appropri- He/she can und standards, laws aluate assembly and		uct and document planning and etings with "decision-makers" and authorities involved. ve conflicts appropriately. derstand, interpret, and apply and regulations within the everall system.	across tions. He/she	e can create complex process descriptions all trades, considering applicable regulateral can organize cross-trade communication reign language.







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9	Human resources management	He/she can identify the training needs of employees and select and organize suitable training courses for further education and training.	He/she can plan personnel requirements, define criteria for the qualification profile of specialist staff and formulate corresponding job descriptions.	He/she can conduct and document personnel development interviews with employees. He/she can prepare an appraisal for employees based on criteria. He/she can recognize the professional and personal development potential of employees and promote it through suitable measures.
10	Digital information and knowledge management	He/she can choose basic and advanced digital tools to solve professional tasks and use them in a targeted manner in his/her own profession. He/she can apply data protection regulations and legal regula-	He/she can choose basic and advanced digital tools to solve professional tasks and use them in a targeted, collaborative manner not only in his/her own profession. He/she can select and use suitable digital tools to create tech-	He/she can design and create building operation workflows from an economic and ecological point of view while taking future requirements into account with the help of suitable tools and modern technologies.
		tions in a professional context. He/she can carry out targeted information research to solve professional tasks and evaluate the results.	nical presentations and documentation. He/she can carry out targeted information research to solve professional tasks and evaluate the results and check their professional accuracy.	



