

**1. TITLE OF THE PROFESSION**

08124002 Automata öntözőrendszer építő és karbantartó

2. TRANSLATED TITLE OF THE PROFESSIONAutomated irrigation system installer and maintainer
(THIS TRANSLATION HAS NO LEGAL STATUS)**3. PROFILE OF SKILLS AND COMPETENCES****A typical holder of the certificate is able to:**

- draw an accurate scaled drawing of 2/12 of the area to be irrigated, record the parameters of the water source;
- select the materials and technologies required for the installation of the irrigation system on the basis of the irrigation system design plan, taking into account technical, economic and operational aspects;
- mark the routes of trenches and above-ground pipes;
- correctly install pipes, valves, nozzles and other water dispensing elements and test the system;
- backfill and seal trenches of the underground zone pipe system according to specifications;
- connect the manually controlled, but not yet automated, operational system to the controller and then test, program and set it up;
- hand over the automated irrigation system upon its installation with detailed explanations and instructions on how to use it;
- maintain the automated irrigation system, detect possible malfunctions and make suggestions for their corrections;
- determine the types, characteristics, installation options, setting modes, advantages and disadvantages of different solutions;
- apply their knowledge of soils, plants, weather, hydraulic calculations, design principles and considerations, installation techniques, direct and alternating current, low voltage and extra-low voltage equipment;
- use measurement procedures to find errors;
- be familiar with and observe electric shock protection and work safety rules;
- work in a team, collaborating with individuals and colleagues in other professions involved in the work.

**4. CLASSIFICATION OF THE VOCATIONAL TRAINING ACCORDING TO THE ISCED
FIELDS OF EDUCATION AND TRAINING (ISCED-F)**

0812 Horticulture

(*) Explanatory notes:

¹ In the original language. | ² The translation of the designation is provided for information purposes only. | ³ Fill it out if necessary. The certificate supplement provides additional information on the qualification but have no legal value in itself. The format of the description is in conformity with Decision (EU) 2018/646 of the European Parliament and of the Council of 18 April 2018 on a common framework for the provision of better services for skills and qualifications (Europass) and repealing Decision No 2241/2004/EC.

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5. OFFICIAL BASIS OF THE CERTIFICATE

<p>Name and status of the authority issuing the certificate</p>	<p>Name and status of the national/regional authority providing accreditation/recognition of the certificate</p> <p>Ministry for Innovation and Technology</p>																		
<p>Level of the certificate (national or international)</p> <p>NQF level: 4</p> <p>EQF level: 4</p> <p>Digital Competence Framework level: 4</p>	<p>Grading scale / Pass requirements</p> <p>Five -grade: 5 excellent 4 good 3 satisfactory 2 pass 1 fail</p>																		
<p>Certificate number: CXK A</p> <p>Serial number: 123456</p> <p>Certificate issue date: 2022.07.29</p>	<p>Designation of the theoretical and practical subjects of the vocational qualification examination and their grades according to a five-grade scale</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">written</td> </tr> <tr> <td>Automated irrigation system design and installation knowledge</td> <td style="text-align: center;">100%</td> <td style="text-align: center;">5</td> </tr> <tr> <td colspan="3">project exercise</td> </tr> <tr> <td>Plastic pipe welding practice</td> <td style="text-align: center;">100%</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Installation and maintenance of automated irrigation systems</td> <td style="text-align: center;">100%</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Result of the qualification examination</td> <td style="text-align: center;">100%</td> <td style="text-align: center;">5</td> </tr> </table>	written			Automated irrigation system design and installation knowledge	100%	5	project exercise			Plastic pipe welding practice	100%	5	Installation and maintenance of automated irrigation systems	100%	5	Result of the qualification examination	100%	5
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<p>Access to next level of education/training</p>	<p>International agreements</p>																		
<p>Other information concerning the vocational training process</p>																			
<p>Legal basis</p> <p>Government Decree 11/2020 (II. 7.) on the Implementation of the Act on Adult Education, Act LXXX of 2019 on Vocational Education and Training.</p>																			

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Description of the sectoral basic training and the theoretical and practical vocational training	Distribution of programme elements in percentage
Total duration of the education/training	500 hours

Entry requirements:

- Educational prerequisite: secondary school qualification
- Medical fitness requirements shall be met

Further information:

WRITTEN EXAMINATION EXERCISES

Irrigation system design

Learning about water distribution uniformity indicators and their use

Hydraulics, properties of water sources

System installation in public spaces

Irrigation control, sensors and other electrical equipment

Water filtration

Microirrigation

Technical characteristics and installation of pipe networks and fittings

Plastic pipe welding

PROJECT EXERCISES

Knowledge of welding technology steps

Performing visual and on-site destructive testing

Maintaining dimensional accuracy

Documentation, marking welding joints

Selection, preparation and professional use of tools and materials

Compliance with labour safety, fire safety and environmental regulations

Professional discussion

You can find more information on the Programme and System Requirements in the following link: <https://ikk.hu>

This certificate supplement was elaborated in accordance with the programme requirements registered by the minister responsible for VET.

National Reference Point: National Office of Vocational Education and Training and Adult Learning: <https://nrk.nive.hu>

Head of Examination Organiser:

Issue date: 2022.07.29

SEAL