



1. TITLE OF THE CERTIFICATE (NL)

Diploma Beroepsonderwijs
Kwalificatie: Technicus service en onderhoud werktuigkundige installaties
Kwalificatiedossier: Service- en onderhoudstechniek

In the original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Certificate Senior Secondary Vocational Education
Qualification: Technician service and maintenance mechanical installations
Qualification file: Service and maintenance technology

This translation has no legal status

3. PROFILE OF SKILLS AND COMPETENCES

Core task 1: Inspects equipment, installations and systems

- 1.1 Prepares for the inspection of equipment, installations and systems
- 1.2 Takes precautions prior to inspection work
- 1.3 Carries out a sensory inspection of equipment, installations and systems
- 1.4 Takes measurements and tests equipment, installations and systems
- 1.5 Prepares a diagnosis and reports on the results
- 1.6 Completes inspection work on equipment, installations and systems

Core task 2: Optimises equipment, installations and systems and repairs faults

- 2.1 Prepares work to resolve faults and to optimise equipment, installations and systems
- 2.2 Takes precautions to resolve faults and to optimise equipment, installations and systems
- 2.3 (Dis)Assembles, adjusts and repairs components of equipment, installations and systems
- 2.4 Checks and tests work carried out on equipment, installations and systems
- 2.5 Hands over equipment, installations and systems
- 2.6 Completes maintenance and modification work

Core task 3: Localises and analyses (complex) faults in (large) mechanical installations

- 3.1 Prepares the tracing of faults on mechanical installations
- 3.2 Localises and analyses (the cause of) complex faults in mechanical installations
- 3.3 Adjusts and sets mechanical equipment, installations and systems
- 3.4 Supervises colleagues

Core task 4: Prevents the release of carbon monoxide in gas incineration systems

- 4.1 Carries out preventive inspection on the entire gas incineration system
- 4.2 Prevents flue gases from entering the accommodation space
- 4.3 Prevents incomplete incineration in the gas incineration system
- 4.4 Completes carbon monoxide prevention work, reports on findings and advises the customer

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

The Technician service and maintenance mechanical installations works at companies that carry out maintenance on (large) mechanical systems. These include systems for hot tap water and climate control at home for private individuals or in the home office and industrial sector. He works in a variety of environments in terms of their nature and size and on all types on engineering systems, both large and small, including systems subject to

*** Explanatory note**

This document is designed to provide additional information about the specified certificate and does not have any 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://www.europass.cedefop.europa.eu/>

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

obligatory inspection according to the Activities Decree and the Decree on Emission Requirements for Medium-sized Heating Installations (BEMS).

5. OFFICIAL BASIS OF THE CERTIFICATE

<p>Name and status of the body awarding the certificate The certificate issued on completion of the programme is signed by the examination board at the school where the pupil attended the programme.</p>	<p>Name and status of the national/regional authority providing accreditation/recognition of the certificate Ministry of Education, Culture and Science</p>																				
<p>Level of the certificate (national or international) Qualification level 4 of the Dutch VET qualification structure Characteristics: non-job related skills such as tactical and strategic capacities. The professional bears his or her own responsibility, which is not only related to practical implementation in terms of monitoring and supervision, but also a more formal, organisational responsibility. The range of tasks also includes drafting new procedures. NLQF-niveau 4 - EQF level 4 - ISCED 3A</p>	<p>Grading scale / Pass requirements</p> <table border="0"> <tr><td>10</td><td>excellent</td></tr> <tr><td>9</td><td>very good</td></tr> <tr><td>8</td><td>good</td></tr> <tr><td>7</td><td>very satisfactory</td></tr> <tr><td>6</td><td>pass</td></tr> <tr><td>5</td><td>fail</td></tr> <tr><td>4</td><td>unsatisfactory</td></tr> <tr><td>3</td><td>very unsatisfactory</td></tr> <tr><td>2</td><td>poor</td></tr> <tr><td>1</td><td>very poor</td></tr> </table>	10	excellent	9	very good	8	good	7	very satisfactory	6	pass	5	fail	4	unsatisfactory	3	very unsatisfactory	2	poor	1	very poor
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<p>Access to next level of education/professions The Technician service and maintenance mechanical installations can:</p> <ul style="list-style-type: none"> • broaden his skills to Technician service and maintenance electrotechnology, professions in refrigeration technology or Technician gas (infrastructure systems); • advance to specialist or manager in the field of service and maintenance in mechanical engineering system management or inspector. 	<p>International agreements Technician service and maintenance mechanical installations is not a regulated profession in the Netherlands. However, the education and training for this profession on qualification level 4 is regulated under the European directive 2005/36/EC, amended by directive 2013/55/EU. The regulated education and training gives access to regulated professions at the level of a diploma according to article 11 of this directive.</p>																				
<p>Legal basis Act on Vocational Education and Training (WEB), registered number of qualification (crebo): 25825 The education and training for this qualification is offered as of 01-08-2022.</p>																					

6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

Senior secondary vocational education features two learning pathways: the school-based pathway (bol) and the training on the job pathway (bbl).

In the school-based pathway, the majority of the course consists of theory at school. The extent of the practical component (vocational practice) is between 20% and 60%. In the training on the job pathway, the extent of vocational practice is at least 60% of the course. The participant works four days a week in a training company, and attends school for theory subjects just one day a week.

In principle it is possible to follow both learning pathways, but which pathway is offered will depend on the individual educational institution.

<p>Average duration of the education/ training leading to the certificate</p>	<p>3 years (4800 study hours) (depending on previous education)</p>
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Entry requirements

The certificate preparatory vocational secondary education (vmbo) advanced vocational programme, combined programme, or theoretical programme, or a comparable level.

7. ADDITIONAL INFORMATION

Dutch senior secondary VET is based on qualification files, that each contain one or more qualifications. The information included in part 3 and 4 is derived directly from the qualification file determined by the Minister of Education, Culture and Science. The complete qualification file can be found at kwalificaties.s-bb.nl, only in Dutch.

7. ADDITIONAL INFORMATION

Optional subjects are linked to the qualification. The optional subjects have a total size of 15% of the course duration. The optional subjects completed by the student are listed on the certificate.

Additional information, including a description of the Dutch national qualifications system, is available at the Netherlands National Reference Point (NRP): www.s-bb.nl. The NRP is the information centre for vocational qualifications in the Netherlands. SBB has been appointed in this capacity by the Ministry of Education, Culture and Science.