

1. TITLE OF THE CERTIFICATE (NL)

Diploma Beroepsonderwijs
Kwalificatie: Researchinstrumentmaker
Kwalificatiedossier: Productietechniek

In the original language

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Certificate Senior Secondary Vocational Education
Qualification: Research instrument maker
Qualification file: Production technology

This translation has no legal status

3. PROFILE OF SKILLS AND COMPETENCES

Core task 1: Manufactures products and/or components

- 1.1 Prepares the work
- 1.2 Manufactures and/or processes the product
- 1.3 Measures and checks the products and/or components
- 1.4 Completes the work and hands over the (metal) product

Core task 2: Creates and tests automated programmes

- 2.1 Prepares the writing of automated programmes
- 2.2 Writes automated programmes for material processing
- 2.3 Tests automated programmes
- 2.4 Implements CNC-processes
- 2.5 Administers and archives product data

Core task 3: Produces components for instruments

- 3.1 Prepares for the production of components
- 3.2 Makes components

Core task 4: Builds and tests instruments

- 4.1 Builds and/or repairs instruments
- 4.2 Tests instruments
- 4.3 Hands over instruments

Core task 5: Designs prototypes

- 5.1 Makes a design plan for a prototype
- 5.2 Makes sketches and designs prototypes
- 5.3 Builds the prototype
- 5.4 Tests the functionality of the prototype

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

The Research instrument maker works in the manufacturing industry in a production hall or workshop at large or small metalworking and plastic production companies, suppliers of components for machine building, offshore, defense and the automotive industry. In the metalworking sector, the Research instrument maker works at companies in the metal product industry, including large and small companies in construction, sheet metal work,

*** 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

pipe bending and welding. He/she also works at supply companies, machine building and in the transport equipment industry including shipbuilding and petrochemicals, offshore and the food industry. In precision engineering, the Research instrument maker works at companies that manufacture components for machine building, offshore, Aerospace and defense. He/she also works at companies that manufacture components for the transport and logistics sector (automotive, shipbuilding and aerospace industry), agro/food, hightech, electrical engineering, medical and optical industry. The Research instrument maker is a technical specialist employed within the company in production at a specific department.

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 Research instrument maker is a senior position within production engineering. He can broaden his professional knowledge towards the position of work planner for example or another profession such as draughtsman/constructor. There is also an option to transfer to higher professional education in one of the following technical study courses: Mechanical engineering, Technical physics, Electrical engineering or a Teacher training.</p>	<p>International agreements Research instrument maker 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): 25897 The education and training for this qualification is offered as of 01-08-2023.</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>4 years (6400 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.

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.