

# CONFIRMATION

## of Product Conformity (QAL1)

**Approved AMS:** CEMSelect OEM II for CO, NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, O<sub>2</sub> and CO<sub>2</sub>

**Manufacturer:** Bühler Technologies GmbH  
Harkortstrasse 29  
40880 Ratingen  
Germany

**Test Institute::** TÜV Rheinland Energy & Environment GmbH

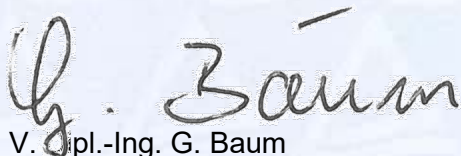
**This is to certify that the AMS has been tested  
according to the standards**

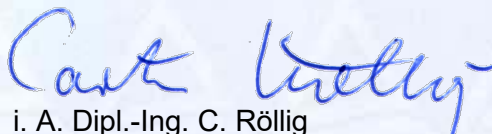
**EN 15267-1 (2009), EN 15267-2 (2023), EN 15267-3 (2007)  
as well as EN 14181 (2014).**

The AMS underwent independent expert testing and was accepted.  
This confirmation is valid up to the publication of the certificate,  
but no longer than 6 months from the date of issue  
(this document contains 5 pages).

**This confirmation is valid until: 15 November 2024**

TÜV Rheinland Energy & Environment GmbH  
Cologne, 31 May 2024

  
i. V. Dipl.-Ing. G. Baum

  
i. A. Dipl.-Ing. C. Röllig

[www.umwelt-tuv.eu](http://www.umwelt-tuv.eu)  
[tre@umwelt-tuv.eu](mailto:tre@umwelt-tuv.eu)  
Tel. +49 221 806-5200

TÜV Rheinland Energy & Environment GmbH  
Am Grauen Stein  
51105 Köln

Test institute accredited to EN ISO/IEC 17025 by DAkkS (German Accreditation Body).  
This accreditation is limited to the accreditation scope defined in the enclosure to certificate D-PL-11120-02-00.

**Confirmation:**  
31 May 2024

**Test Report:** EuL/21263275/A dated 26 February 2024

**Expiry date:** 15 November 2024

**Approved application:**

The tested AMS is suitable for use at plants according to Directive 2010/75/EC, chapter III (combustion plants / 13th BImSchV:2021), chapter IV (waste incineration plants / 17th BImSchV:2021), Directive 2015/2193/EC (44th BImSchV:2021), 30th BImSchV:2019, TA Luft:2021 and 27th BImSchV:2013. The measured ranges have been selected so as to ensure as broad a field of application as possible.

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a 12 month field test at a waste incineration.

The AMS is approved for an ambient temperature range of +5 °C to 40 °C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing. As changes in legal provisions are possible, any potential user should ensure that this AMS is suitable for monitoring the emission limit values and oxygen concentration relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the intended purpose.

**Note:**

The legal regulations mentioned do not correspond to the current state of legislation in every case. Each user should, if necessary, in consultation with the competent authority, ensure that this AMS meets the legal requirements for the intended use. In addition, it cannot be ruled out that legal regulations governing the use of a measuring device for emission monitoring may change during the lifetime of the certificate.

**Basis of the confirmation**

This confirmation is based on:

- Test report EuL/21263275/A dated 26 February 2024 issued by TÜV Rheinland Energy & Environment GmbH
- The ongoing surveillance of the product and the manufacturing process
- Expert testing and approval by an independent body

**Confirmation:**  
31 May 2024

**AMS designation:**

CEMSelect OEM II for CO, NO, NO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, O<sub>2</sub> and CO<sub>2</sub>

**Manufacturer:**

Bühler Technologies GmbH, Ratingen

**Field of application:**

Modular measuring system for plants requiring approval to the 13th BImSchV, the 17th BImSchV, the 30th BImSchV, the 44th BImSchV, the TA-Luft as well as plants according to the 27th BImSchV

**Measuring ranges during performance testing:**

Component	Module	Certification range	Supplementary measuring ranges		Unit
	<b>Ultramat23-7MB235a-0bcd6-3efg</b>				
CO	a=5; bc=(AG,AJ) <sup>1</sup>	0 - 50	0 - 1250	0 - 3000	mg/m <sup>3</sup>
	a=7; (bc=(AG,AJ) <sup>1</sup> or ef=AA,(AG,AJ) <sup>1</sup> )				
	a=8; bc=BM,(AK,AS) <sup>1</sup>				
NO <sub>x</sub>	a=7; (bc=PA,(PF,PG,PH,PU,PV,PW) <sup>1</sup> or ef=(PF,PG,PH,PU,PV,PW) <sup>1</sup> )	0 - 50	0 - 2000	-	mg/m <sup>3</sup>
	a=8; bc=AS <sup>1</sup> )				
NO	a=5; bc=PA,(PF,PG,PH,PU,PV,PW) <sup>1</sup>	0 - 50	0 - 1000	-	mg/m <sup>3</sup>
	a=7; (bc=PA,(PF,PG,PH,PU,PV,PW) <sup>1</sup> or ef=(PF,PG,PH,PU,PV,PW) <sup>1</sup> )				
	a=8; bc=(AK,AS) <sup>1</sup>				
NO <sub>2</sub>	a=5; bc=NS	0 - 50	0 - 1000	-	mg/m <sup>3</sup>
	a=7,8; ef=NS				
SO <sub>2</sub>	a=5; bc=NS,(NF,NG,NH,NW) <sup>1</sup>	0 - 70	0 - 1250	-	mg/m <sup>3</sup>
	a=7; (bc=(NF,NG,NH,NW) <sup>1</sup> or ef=NS,(NF,NG,NH,NW) <sup>1</sup> )				
	a=8; ef=NS,(NF,NG,NH,NW) <sup>1</sup>				
CO <sub>2</sub>	a=5; bc=CP	0 - 25	-	-	Vol.-%
	a=7; (bc=CP oder ef=CP)				
	a=8; bc=BM				
O <sub>2</sub> electrochemical	a=5,7,8; d=1	0 - 25	-	-	Vol.-%

<sup>1)</sup> additional range

**Software version:**

ULTRAMAT 23-7MB2355 4.02.13  
 ULTRAMAT 23-7MB2357 4.02.13  
 ULTRAMAT 23-7MB2358 4.02.13  
 SIEMENS SIMATIC Set CEM CERT 7MB1957 Rev. 3.0.5



**Confirmation:**  
31 May 2024

**Restrictions:**

none

**Notes:**

1. The modules of the ULTRAMAT 23 series must be operated with an interval of 24 h for automatic zero point adjustment
2. The maintenance interval is 6 months.
3. The modular measuring system CEMSelect OEM II includes a system cabinet with housing protection class IP40. The system cabinet can be equipped with a climate control unit or a fan unit.
4. The measuring system has a digital interface for data transmission in accordance with VDI 4201 Part 1 (General Requirements), Part 3 (Modbus TCP/IP) and Part 4 (OPC).
5. The measuring system can be operated with the following sample gas cooler models: RC1.2+ and EGK 2-19 (+) from Bühler Technologies GmbH and MAK20-2 from AGT-PSG GmbH

**Test Institute:** TÜV Rheinland Energy & Environment GmbH, Cologne  
Report No.: EuL/2163275/A dated 26 February 2024

**Confirmation:**  
31 May 2024

## Tested product

This confirmation applies to automated measurement systems conforming to the following description:

The entire tested CEMSelect OEM II modular measuring equipment is composed of a heated sample gas sampling probe, the heated sample gas line, the two-stage sample gas cooler, the sample gas feed pump and a maximum of three multicomponent analysers from the available analysers Ultramat 23-7MB2355, Ultramat 23-7MB2357 or Ultramat 23-7MB2358.

Measuring cabinet CEMSelect OEM II

Probe in test

Manufacturer: Bühler Technologies GmbH  
Type: GAS 222.20-Cal-twin incl. ceramic filter (length 100 cm), heated 180 °C

Heated sample gas line

Temperature: 180 °C  
Length: 50 m in the field, 10 m in the laboratory  
Diameter (inside): 4 mm  
Material: PTFE

Compressor cooler in testing

Manufacturer: Bühler Technologies GmbH  
Type: RC1.2+, 2 cooling stages, dew point at 4 °C

Alternative cooler models

Manufacturer: Bühler Technologies GmbH  
Type: EGK 2-19 (+), 2 cooling stages, dew point at 5 °C  
Manufacturer: AGT-PSG GmbH  
Type: MAK20-2, 2 cooling stages, dew point at 4 °C

Sample gas pump

Manufacturer: Bühler Technologies GmbH  
Type: P 2.3

Analytical modules

Manufacturer: Siemens AG  
Type: Ultramat 23-7MB2355  
Ultramat 23-7MB2357  
Ultramat 23-7MB2358

The CEMSelect OEM II modular measuring system includes a system cabinet with housing protection class IP40. The system cabinet can be equipped with an air-conditioning unit or with a fan unit. The sample gas pump with integrated gas recirculation for adjusting the sample gas flows is located between the first and second cooler stages. A fine filter for fine dust separation is also integrated into the cooler housing. Downstream of the sample gas cooler, the gas path splits into either two or three sections and supplies the analyser modules arranged in parallel with sample gas. The excess gas flows off via a bypass, if necessary. Immediately upstream of each analyser module is another condensate filter which closes the gas path in the event of moisture breakthrough in order to protect the analysers. To connect zero gas for automatic zero point setting (AutoCal), a three-way valve is installed upstream of the pump, which is switched by the SIMATIC. For the connection of zero/test gases, a further three-way valve is installed downstream of the pump which, if necessary, can offer corresponding gases for the automatic adjustment of zero and reference point - switched time-controlled by the SIMATIC. Alternatively, the test gases can also be supplied manually via a third three-way valve.