

Translation

EU-Type Examination Certificate Supplement 1

Equipment intended for use in potentially explosive atmospheres
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 19 ATEX E 012 X**

Product: **Combustion calorimeter type CWD3000 EXP**

Manufacturer: **Union Instruments GmbH**

Address: **Zeppelinstrasse 42, 76185 Karlsruhe, Germany**

This supplementary certificate extends EU-Type Examination Certificate No. BVS 19 ATEX E 012 X to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential Report No. BVS PP 19.2043 EU.

The Essential Health and Safety Requirements are assured in consideration of:

EN 60079-0:2012 + A11:2013 General requirements
EN 60079-2:2014 Pressurised enclosure "p"

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:

 **II 2G Ex pxb IIC T4 Gb**

DEKRA Testing and Certification GmbH
Bochum, 2020-01-22

Signed: Jörg-Timm Kilisch

Managing Director

13 **Appendix**

14 **EU-Type Examination Certificate**

**BVS 19 ATEX E 012 X
Supplement 1**

15 **Product description**

15.1 **Subject and type**

Combustion calorimeter type CWD3000 EXP

15.2 **Description**

The combustion calorimeter type CWD3000 EXP is an analyzer for determining the Wobbe index, density and caloric value of process gas (fuel gas).

The calorimeter consists of three sections:

Cell 1: Input fuel gas, pressure regulation and solenoid valves

Cell 2: Combustion calorimeter with compressed air inlet, flue gas outlet and outlet for ventilation of cell 1

Cell 3: Control with display and operating elements, electrical terminals and outlet to the overpressure monitoring system

Cells 2 and 3 are designed in type of protection Pressurized Enclosures (cell 2 with continuous flow, cell 3 with leakage compensation); the FS 870 S system (IECEX BVS 10.0095) is used to monitor purging, overpressure and indirectly (through the minimum overpressure in cells 2 and 3) the continuous flow. Compressed air is used as protective gas.

Cell 1 is technically ventilated with protective gas from cell 2. The solenoid valves used are certified separately.

Reason for the supplement:

- Modified outlet for the flue gas
- Use of a modified solenoid valve

15.3 **Parameters**

15.3.1 **Electrical data**

Rated voltage	230 V or 115 V, 50/60 Hz
Power consumption	max. 185 W

15.3.2 **Protective gas (Pressurized air)**

Maximum inlet pressure	5 bar
Minimum inlet pressure	4.5 bar
Minimum overpressure	23 mbar
Overpressure in operation	23 ... 35 mbar
Maximum overpressure	40 mbar
Free volume	204 l
Minimum purge volume	1020 l

16 **Report Number**

BVS PP 19.2043 EU, as of 2020-01-22

17 **Special Conditions for Use**

- 17.1 The escaping fumes must be safely removed.
- 17.2 The tightness of the gas paths of the combustion calorimeter must be checked during regular inspections.
- 17.3 The permissible ambient temperature range is $-10\text{ °C} \leq T_a \leq 50\text{ °C}$.

18 **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

19 **Drawings and Documents**

Drawings and documents are listed in the confidential report.

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH
Bochum, 2020-01-22
BVS-wit/Mu A 20190937



Managing Director