

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 01ATEX1172** Issue Number: **2**

(4) Equipment: **Measuring head Model X100**

(5) Manufacturer: **Bronkhorst High-Tech B.V.**

(6) Address: **Nijverheidsstraat 1a, 7261 AK Ruurlo, the Netherlands**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential test report number 212709500.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006

EN 60079-11 : 2007

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

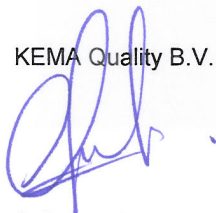
(12) The marking of the equipment shall include the following:



II 2 G Ex ib IIC T4

This certificate is issued on July 21, 2009 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



C.G. van Es
Certification Manager

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 01ATEX1172**

Issue No. 2

(15) **Description**

The measuring head model X100 is used in the Bronkhorst High-Tech B.V. mass flow meter. The sensor is operating on a principle of heat transfer by sensing the ΔT along a heated section of a capillary tube.

Ambient temperature range $-10\text{ }^{\circ}\text{C} \dots +70\text{ }^{\circ}\text{C}$.

Electrical data

Signal circuit (terminals 1, 2 and 3):

in type of protection intrinsic safety Ex ib IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 28\text{ V}$; $I_i = 98\text{ mA}$; $P_i = 686\text{ mW}$; $C_i = 1,2\text{ nF}$ between terminals 1 and 3, 120 nF between terminal 2 and enclosure; $L_i = 0,1\text{ mH}$.

(16) **Test Report**

KEMA No. 212709500.

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212709500.