

# CERTIFICATE

## of Product Conformity (QAL1)

Certificate No.: 0000074630\_01

**Certified AMS:** MT100 for velocity

**Manufacturer:** Fluid Components International LLC  
1755 La Costa Meadows Drive  
San Marcos, California 92075  
USA

**Test Institute:** TÜV Rheinland Energy GmbH

**This is to certify that the AMS has been tested  
and found to comply with the standards  
EN 15267-1 (2009), EN 15267-2 (2009), EN 15267-3 (2008),  
EN 16911 (2013) and EN 14181 (2014).**

Certification is awarded in respect of the conditions stated in this certificate  
(this certificate contains 6 pages).  
The present certificate replaces certificate 0000074630\_00 dated 03 September 2021.



Suitability Tested  
EN 15267  
QAL1 Certified  
Regular  
Surveillance

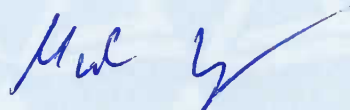
www.tuv.com  
ID 0000074630

Publication in the German Federal Gazette  
(BAnz) of 11 April 2022

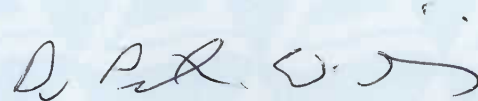
German Environment Agency  
Dessau, 31 May 2022

This certificate will expire on:  
11 April 2027

TÜV Rheinland Energy GmbH  
Cologne, 30 May 2022



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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 the certificate D-PL-11120-02-00.

<b>Test report:</b>	936/21247922/B dated 31 August 2021
<b>Initial certification:</b>	03 September 2021
<b>Expiry date:</b>	11 April 2027
<b>Publication:</b>	BAnz AT 11.04.2022 B10, Chap. III No. 1.1

### **Approved application**

The tested AMS is suitable for use at plants according to Directive 2010/75/EC, chapter III (13th BImSchV:2021), chapter IV (17th BImSchV:2021), Directive 2015/2193/EC (44th BImSchV:2021), the 27th BImSchV:2013, 30th BImSchV:2019 and TA Luft:2021. 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 6 month field test at a waste incineration plant.

The AMS is approved for an ambient temperature range of -20° to +50°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 flue gas velocity relevant to the application.

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

### **Note:**

The legal regulations mentioned do correspond to the current state of. 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 certification**

This certification is based on:

- Test report 936/21247922/B dated 31 August 2021 of TÜV Rheinland Energy GmbH
- Suitability announced by the German Environment Agency (UBA) as the relevant body
- The ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz AT 11.04.2022 B10, Chapter III No. 1.1,  
Announcement by UBA dated 09 March 2022:

**AMS designation**

MT100 for measurement of velocity

**Manufacturer:**

Fluid Components International LLC., San Marcos, USA

**Field of application:**

For plants requiring approval and plants according to the 27th BImSchV.

**Measuring range during the performance test:**

Component	Certification range	Unit
Velocity	0 – 30	m/s

**Software version:** 3.08M

**Restriction:**

The measuring device can only be used in waste gas that is not saturated with water vapor.

**Notes:**

1. The maintenance interval is three months.
2. Supplementary test (maintenance interval extension) to the announcement of the Federal Environment Agency (Umweltbundesamt) of 29 June 2021 (BAnz AT 05.08.2021 B5, Chapter II Number 1.1).

**Test institute:** TÜV Rheinland Energy GmbH, Cologne

**Test report No.:** 936/21247922/B dated 31 August 2021

**Certified product**

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

The AMS tested here consists of one or more measuring probes, in which one heated and one unheated sensor is installed per probe, and the electronics / control unit. The individual signals of the measuring probes (up to eight) result in an output signal that represents the total flow. The number of measuring probes results from the dimensions of the flue gas ducts where the probes are to be installed later and the volume flow determined.

During the performance test, 2 control units with two measuring probes each were used. Through this potential combination of the number of probes and sensors, the smallest possible number of measuring probes was tested and, in addition, a practice-oriented distribution of the sampling points is possible. For each control unit up to four measuring probes can be installed.

Software version 3.08M remained unchanged over the entire period of testing.

The AMS tested here comprises the following components:

- Electronic / control unit
- Two measuring probes, length during the performance test 533 mm each
- Operating software ST MT Configurator

**General notes**

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. The manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate. This certification mark may be applied to the product or used in advertising materials for the certified product.

This document and the certification mark remains property of TÜV Rheinland Energy GmbH. With revocation of the publication the certificate loses its validity. After the expiration of the certificate and on requests of the TÜV Rheinland Energy GmbH this document shall be returned and the certificate mark must not be employed anymore.

The relevant version of this certificate and its expiration is also accessible on the internet: [gal1.de](http://gal1.de).

### **History of documents**

Certification of MT100 is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

### **Initial certification according to EN 15267**

Certificate No. 0000074630\_00: 03 September 2021  
Expiry date of the certificate: 04 August 2026  
Test report 936/21247922/A dated 11 February 2021  
TÜV Rheinland Energy GmbH  
Publication BAnz AT 05.08.2021 B5, chapter II number 1.1  
UBA announcement dated 29 June 2021

### **Supplementary testing according to EN 15267**

Certificate No. 0000074630\_01: 31 May 2022  
Expiry date of the certificate: 11 April 2027  
Test report 936/21247922/B dated 31 August 2021  
TÜV Rheinland Energy GmbH  
Publication BAnz AT 11.04.2022 B10, chapter III number 1.1  
UBA announcement dated 9 March 2022

### Calculation of overall uncertainty according to EN 14181 and EN 15267-3

#### Measuring system

Manufacturer	Fluid Components International LLC.
AMS designation	MT100
Serial number of units under test	675808 / 675809
Measuring principle	Thermal dispersion

#### Test report

Test laboratory	936/21247922/C TÜV Rheinland
Date of report	2021-12-23

#### Measured component

Certification range	Velocity 0 - 30 m/s
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#### Evaluation of the cross-sensitivity (CS)

(system with largest CS)

Sum of positive CS at zero point	0,00 m/s
Sum of negative CS at zero point	0,00 m/s
Sum of positive CS at span point	0,00 m/s
Sum of negative CS at span point	0,00 m/s
Maximum sum of cross-sensitivities	0,00 m/s
Uncertainty of cross-sensitivity	$u_i$ 0,000 m/s

#### Calculation of the combined standard uncertainty

##### Tested parameter

			$u^2$
Standard deviation from paired measurements under field conditions *	$u_D$	0,097 m/s	0,009 (m/s) <sup>2</sup>
Lack of fit	$u_{lof}$	0,116 m/s	0,013 (m/s) <sup>2</sup>
Zero drift from field test	$u_{d,z}$	-0,052 m/s	0,003 (m/s) <sup>2</sup>
Span drift from field test	$u_{d,s}$	0,139 m/s	0,019 (m/s) <sup>2</sup>
Influence of ambient temperature at span	$u_t$	0,100 m/s	0,010 (m/s) <sup>2</sup>
Influence of supply voltage	$u_v$	0,036 m/s	0,001 (m/s) <sup>2</sup>
Cross-sensitivity (interference)	$u_i$	0,000 m/s	0,000 (m/s) <sup>2</sup>
Uncertainty of reference material at 70% of certification range	$u_{rm}$	0,242 m/s	0,059 (m/s) <sup>2</sup>

\* The larger value is used :

"Repeatability standard deviation at set point" or

"Standard deviation from paired measurements under field conditions"

Combined standard uncertainty ( $u_c$ )	$u_c = \sqrt{\sum (u_{max,j})^2}$	0,34 m/s
Total expanded uncertainty	$U = u_c * k = u_c * 1.96$	0,66 m/s

#### Relative total expanded uncertainty

##### Requirement of 2010/75/EU

Requirement of EN 15267-3

<b>U in % of the range 30 m/s</b>	<b>2,22</b>
<b>U in % of the range 30 m/s</b>	<b>7,84 **</b>
U in % of the range 30 m/s	5,88

\*\* The EU-directive 2010/75/EC on industrial emissions does not define requirements for this component.

A value of 7,84 % was used instead.