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CONFIRMATION

of Product Conformity (QAL1)

Approved AMS:	D-FW 440 M-EU-DD for dust monitor
Manufacturer:	DURAG GmbH Kollaustr. 105 22453 Hamburg 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 15859 (2010) 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 9 months from the date of issue
(this document contains 4 pages).

This confirmation is valid until: 31 December 2026

TÜV Rheinland Energy & Environment GmbH
Cologne, 10 April 2026

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

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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 certificate D-PL-11120-02-00.

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Test Report: EuL/21271144/A dated 20 October 2025

Expiry date: 31 December 2026

Approved application
The tested AMS is suitable for use as a dust monitor for filter monitoring downstream of filter systems at plants Directive 2010/75/EC, chapter III (combustion plants / 13th BImSchV:2021), Directive 2010/75/EC, chapter IV (waste incineration plants / 17th BImSchV:2023), Directive 2015/2193/EC (44th BImSchV:2022), TA Luft:2021, 30th BImSchV:2019 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 eight month field test at an ancillary system of waste incineration.

The AMS is approved for an ambient temperature range of -20 °C 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 measured values / emission limit values 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/21271144/A dated 20 October 2025 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

AMS designation: D-FW 440 M-EU-DD

Manufacturer: DURAG GmbH, Hamburg, Germany

Field of application:
Dust monitor for filter monitoring downstream of dust separators on installations requiring approval under the 13th BImSchV, the 17th BImSchV, the 30th BImSchV and the TA-Luft, and on installations under the 27th BImSchV and the 44th BImSchV

Measuring ranges during performance testing:

Component	Certification range	Supplementary measuring ranges		Unit
Dust	0 – 7.5	0 – 15	0 – 100	mg/m³

Software version: 3.2.4

Restrictions:
1. Use in exhaust gases saturated with water vapour is not possible. Similarly, droplet emissions affect the measured dust concentration.
2. Use immediately downstream of electrostatic precipitators is not possible.
3. Use is possible at exhaust gas velocities in the range of 3–40 m/s.

Notes:
1. The maintenance interval is four months.
2. The measuring device can only be adjusted to the zero and reference points using the automatic adjustment function.
3. At exhaust gas velocities in the range of 3–40 m/s, the dependence on exhaust gas velocity is eliminated by the integrated velocity compensation. To do this, the 4–20 mA analogue input must be connected to a signal representing the exhaust gas velocity. If velocity compensation is activated, the comparison measurements must be carried out at different exhaust gas velocities as part of the QAL2 investigations.
4. At constant exhaust gas velocities (± 10 % of the average exhaust gas velocity), a fixed value for the exhaust gas velocity may also be entered.
5. If a purge air device is used, compliance with the specified purge air flow rate must be checked.
6. The measuring system must be operated at 24-hour intervals for the automatic control cycle.
7. The manufacturer’s recommendations regarding probe length must be followed. Probe lengths ranging from 250 mm to 1750 mm may be used.
8. The power supply can be 230 V AC or 24 V DC.
9. The measuring system has a digital Modbus interface (serial RS 485), in accordance with VDI 4201 Parts 1 and 3.

Test Institute: TÜV Rheinland Energy & Environment GmbH, Cologne
Report No.: EuL/21271144/A dated 20 October 2025

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Tested product

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

The certified measuring device is the D-FW 440 M-EU-DD dust monitor from DURAG GmbH. The measuring principle is based on inductive electrification technology. Particles flowing past or striking an insulated probe generate a signal consisting of an AC and a DC component. The signal is processed electronically to reduce background noise, which must be distinguished from the measurement signal, and to provide an output signal proportional to the dust load. Compared to purely triboelectric methods based on the DC signal, this technology is less sensitive to sensor contamination, temperature drift and changes in velocity.

The measuring system is designed for a measuring range of 0 to 100,000 IEU; this range corresponds to an output signal of 4 to 20 mA. The correlation between the Inductive Electrification Unit (IEU) and the dust concentration can be established by calibrating the mA signal based on a standard reference method.

The type-approved measuring system consists of the D-FW 440 M-EU-DD dust monitor with a standard probe length of 250 mm, a welded-on socket with a Tri-Clamp connection (ø 50 mm, 70 mm length), a Tri-Clamp clamp, a blind cover and a PTFE seal (ø 50 mm). A purge air adapter and probe extensions of 250 mm and 500 mm are available as options. The Dust Tool software can be used for operation. An RS 485 interface is available for communication; an RS 485 USB adapter (EC900041) can also be used for operation. An additional RS 485 RTU interface is available for measurement data transmission via the Modbus protocol. A direct USB interface is also available as a service interface. A reference signal generator can be used optionally for external calibration verification. In field testing, the internal automatic control cycle proved sufficient for calibration verification.

The certified scope of delivery includes the following components in particular:

Weld-on adapter:	MC900229
Blind cap:	MC900033
Tri-Clamp clamp:	MC900034
Tri-Clamp Teflon seal:	MC900007
Optional:	Purge air adapter MC900203
Optional:	Probe extension 250 mm / 500 mm
Operating software:	Dust Tool
Interface adapter:	RS 485 USB EC900041