D-R 808
Dust monitor
Reliable monitoring of low to medium concentrations
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Forward scattering principle
Thanks to modern filter technology, dust concentrations in combustion plants are typically very low. For monitoring very low concentrations the forward scattering principle is ideally suited. Here, the modulated light of a laser diode penetrates the measuring volume in the flue duct. A highly sensitive detector records the light scattered by the dust particles in a forward direction. The measured scattered light is directly proportional to the dust concentration.

Technical Data

<table>
<thead>
<tr>
<th>Measuring value</th>
<th>Dust concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring range</td>
<td>Min.: 0 … 5 mg/m³ Max.: 0 … 200 mg/m³ Lowest certified range: 0 … 7.5 mg/m³</td>
</tr>
<tr>
<td>Measuring principle</td>
<td>Forward scattering</td>
</tr>
<tr>
<td>Flue gas temperature</td>
<td>Above dew point up to 350 °C, optional up to 500 °C</td>
</tr>
<tr>
<td>Inner duct pressure</td>
<td>–50 … +50 hPa</td>
</tr>
<tr>
<td>Inner duct diameter</td>
<td>&gt; 0.3 m</td>
</tr>
<tr>
<td>Power supply</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>–40 … +60 °C</td>
</tr>
<tr>
<td>IP protection class</td>
<td>IP65</td>
</tr>
<tr>
<td>Dimensions (h x w x d)</td>
<td>160 x 160 x 600/1000 mm</td>
</tr>
<tr>
<td>Length/lance from flange</td>
<td>400/800 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 3/7 kg</td>
</tr>
</tbody>
</table>

Due to the simplified, advanced design, the D-R 808 is unmatched in its ease of maintenance. There is no need to remove the device from the stack for the linearity check with optical filters.*

* if stack pressure is negative
Functions + Advantages

- One-sided installation
- No alignment needed
- Automatic zero and reference point check
- Automatic contamination check and correction
- Integrated purge air monitoring
- Linearity check without removing the device from the stack*
- Low maintenance

Flexible operation, emission values always in view

You can choose to operate the device with either the universal operating unit D-ISC 100, the software D-ESI 100 or via the digital interface.

Universal operating unit D-ISC 100

- Connection of several DURAG devices
- Operation, parameterization and signal transmission
- Installation either next to the measuring device at the stack or in the control room

Software D-ESI 100

- Operation, parameterisation and management of DURAG devices
- Access to the devices even without operating unit
- Remote support via web interface
Features + Benefits

- **Certified for official emission monitoring**
  Type approved according to EN 15267-3, compliant with the requirements of US-EPA PS-11

- **Lowest certified range 0 ... 7.5 mg/m³**
  Reliable measurement of very low dust concentrations

- **Space-saving and easy installation**
  One-sided installation without alignment

- **Durable through integrated purge air monitoring**
  Protection of the device through continuously monitored purge air supply

- **Low maintenance effort**
  Linearity check with reference filters without removing the device from the stack *

- **Reliable emission monitoring**
  Automatic control functions ensure reliable measuring values

Applications

Continuous emission measurement on plants requiring monitoring, e.g. in the following industries:

- Waste incineration
- Cement industry
- Power industry
- Wood industry
- Chemical industry
- Steel industry

Process monitoring, e.g.:

- Monitoring of filter plants
- Monitoring of ventilation units
Branch offices Sales and Service

**DURAG Sales + Service GmbH & Co. KG**  
Kollaustraße 105  
22453 Hamburg, Germany  
Tel. +49 40 55 42 18-0  
Fax +49 40 58 41 54  
info@durag.de

**DURAG Branch East**  
Halsbrücker Straße 34  
09599 Freiberg, Germany  
Tel. +49 3731 30 04-0  
Fax +49 3731 30 04-22  
durag-ost@durag.de

**DURAG Branch North**  
Kollaustraße 105  
22453 Hamburg, Germany  
Tel. +49 40 55 42 18-0  
Fax +49 40 58 41 54  
durag-nord@durag.de

**DURAG Branch South**  
Weidenweg 16  
73087 Bad Boll, Germany  
Tel. +49 7164 912 25-0  
Fax +49 7164 912 25-50  
durag-sued@durag.de

**DURAG Branch West**  
An der Pönt 53a  
40885 Ratingen, Germany  
Tel. +49 2102 74 00-0  
Fax +49 2102 74 00 28  
durag-west@durag.de

**DURAG Brazil**  
DURAG Siena do Brasil Ltda  
Rua Vinte e Dois de Agosto, 66  
Diadema - SP  
09941-530 Brazil  
Tel. +55 11 4071-5050 r.28  
Fax +55 11 4077-1718  
info@duragsiena.com.br

**DURAG France S. a. r.l.**  
Parc GIP Charles de Gaulle  
49, rue Léonard de Vinci, BP 70166  
95691 Goussainville CEDEX, France  
Tel. +33 1 301 811 80  
Fax +33 1 393 383 60  
info@durag-france.fr

**DURAG Inc.**  
1355 Mendota Heights Road  
Suite 200  
Mendota Heights  
MN 55120, USA  
Tel. +1 651 451-1710  
Fax +1 651 457-7684  
Toll Fee: 800 811 98 52  
durag@durag.com

**DURAG Inc. (Houston Branch)**  
440 Cobia Drive  
Suite 1104 (building #11)  
Katy, TX 77494  
Tel. +1 832 437 3173  
Fax +1 832 437 8272  
Toll Fee: 800 811 98 52  
durag@durag.com

**DURAG India Instrumentation Private Limited**  
#27/30, 2nd Main Road  
Industrial Town, Rajajinagar  
Bengaluru 560 044, India  
Tel. +91 80 2314 5626, 2301 1700  
Fax +91 80 2314 5627  
info@duragindia.com

**DURAG Instrumentation (Shanghai) Co., Ltd.**  
Room 706, Dibao Plaza, No. 3998  
Hongxin Rd., Minhang District  
Shanghai, 201103 PR China  
Tel. +86 21 60732979-200  
Fax +86 21 60732980-205  
info@durag-cn.com

**DURAG Italia S.r.l.**  
Via Carlo Panseri, 118  
CIM uffici, P. secondo  
28100 Novara, Italy  
Tel. +39 0321 679569  
Fax +39 0321 474165  
info@durag.it

**DURAG Japan Office**  
c/o TMS Planning Inc.  
291-2 Umena, Mishima-shi  
Shizuoka-ken  
411-0816 Japan  
Tel. +81 55 977 3994  
Fax +81 55 977 3994  
info@durag.jp

**DURAG Korea Office**  
RM #1131, Manhattan Building,  
36-2, Yeouido-Dong,  
Yeongdeungpo-Gu, Seoul, Korea  
Tel. +82 2 761 8970  
Fax +82 2 761 8971  
info@durag-group.co.kr

**DURAG Middle East (Branch)**  
Dubai Airport Free Zone  
5 West Wing, Office 124  
Dubai, UAE  
P.O. Box 371555  
Tel. +971 4260251 0  
dme@durag.de

**DURAG Russia OOO**  
Andropova avenue 18/6  
Office 5-09  
115432 Moscow, Russia  
Tel. +7 499 4180090  
Fax +7 499 4180091  
info@durag-group.ru

**DURAG UK GmbH**  
Bretby Business Park, Ashby Road  
Burton-on-Trent, Staffordshire  
DE15 0YZ, Great Britain  
Tel. +44 1283 553 481  
Fax +44 1283 553 482  
durag.uk@durag.de

www.durag.com