D-RC 120

Automatic sampling device for gravimetric dust measurements

- Portable system
- Easy handling
- Automatic isokinetic control
- Highest measuring accuracy
- Compliant to EN 13284-1 and US-EPA Method 5
Automatic sampling device for gravimetric dust measurements

Features
- Portable system
- Easy handling
- Automatic isokinetic control
- Suitable for in- and out-stack sampling
- Highest measuring accuracy
- Available in stainless steel and titanium
- Compliant to EN 13284-1, VDI 2066, EN ISO 9096 and US-EPA Method 5

Applications
- Calibration of dust monitors
- Control measurements
- Measurements at filter plants

Description
The D-RC 120 extracts isokinetically a partial gas stream from the measuring gas duct whereas the extraction is controlled fully automatically. The device can be conveniently operated via Windows software. The partial gas stream is sucked through a filter in which the contained dust is deposited.

The dust concentration is determined by weighing the filter before and after the extraction.

In parallel to the gas sampling, the measurements of the dust monitor under test can be recorded and averaged.

System components
- D-RC 120 MD, consisting of control unit, pump, drying tower, external sensor unit, Windows software and accessories
- D-RC 120 FD filter head device, suitable for plane or tubular filters
- D-RC 120 P combination probe, heatable incl. gooseneck with nozzles

Option
- Filter head device heater for out-stack sampling

Technical data

<table>
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<th>Parameter</th>
<th>Specification</th>
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<td>gravimetric analysis</td>
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<tr>
<td>measuring result</td>
<td>dust concentration</td>
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<tr>
<td>sampling</td>
<td>In-stack, out-stack</td>
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<tr>
<td>measuring range</td>
<td>Dust concentration: 0.1 ... 2000 mg/m³</td>
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<tr>
<td></td>
<td>Differential pressure: 0.01 ... 10 hPa</td>
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<tr>
<td></td>
<td>Absolute pressure: 400 ... 1300 hPa</td>
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<tr>
<td></td>
<td>Temperature: 0 ... 500 °C</td>
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<tr>
<td>Sample Gas</td>
<td>Sample volumetric flow rate: 0.5 ... 4 m³/h</td>
</tr>
<tr>
<td>- temperature</td>
<td>0 ... 500 °C</td>
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<tr>
<td>- velocity</td>
<td>2 ... 39 m/s</td>
</tr>
<tr>
<td>- pressure</td>
<td>-200 ... +200 hPa</td>
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<tr>
<td>- relative humidity</td>
<td>0 ... 95 % relative humidity, optional measurement in saturated gas below the dew point</td>
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Probes
- length: 1000 ... 3000 mm, others on request
- diameter: 70 mm, quick release mounting for 3” port
- weight: 1.5 kg + 5.4 kg / m
- probe material: stainless steel, optional titanium

Control unit
- power supply: 230 VAC, 50/60 Hz, optional 115 VAC, 50/60 Hz
- ambient temperature: -10 ... 60 °C
- protection: IP 33
- electrical interfaces: 1x 12 V output for audible signal
- 1x 4 ... 20 mA input, e.g. for AMS
- 1x RS 485 with USB converter
- operation: operating software, requires netbook/notebook (not scope of delivery) with Windows 7 or Windows 8
- dimensions (h x w x d): approx. 350 x 280 x 250 mm
- weight: approx. 8.5 kg