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Product information GMD 12

The GMD 12 is an automatic system for isocinetic dust and particulate matter measurement in exhaust gas channels and stacks. These gravimetric dust measurements are used as reference measuring method for the calibration of dust measuring devices.

Characteristics and function

The GMD 12 is able to record independently all parameters being necessary for the dust measurement (e.g. humidity of the measuring gas, velocity in the stack as well as temperature and pressure).

Low concentrations of dust and particulate matter can be determined by combining different nozzles with the sampling probe for particulate matter.

Due to the optional plane filter holder the GMD 12 is also approved for m e a-s u r e m e n t s complying with official requirements according to DIN EN 13284-1.

plane filter holder

accessories for particulate matter measurement

Apart from measuring and probe case the system includes an accessory case and a pump case with an external high-performance pump.

The comfortable accessory box contains all necessary cables, hoses, filter sleeves as well as the separate printer.

Highlights of the device:

- automatic sampling system for gravimetric dust measurements
- ergonomic sampling probe with integrated aerosol filter
- highly-resolving pivotable graphic display
- Data transfer via RS232 interface or cmpact flash memory card

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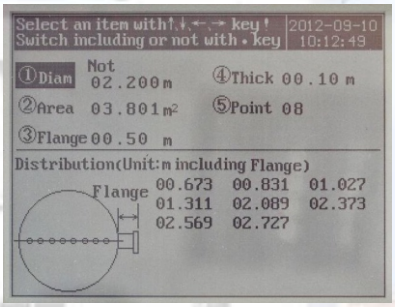
Operation of GMD 12

Setup:	date, time etc.
Calculate:	channel dimensions proposal of sampling points
Zero:	zero point calibration of all sensors
Test:	determine nozzle diameter humidity measurement
Dust:	start dust measurement isocinetically or fixed flow
Data:	measuring data memory
Maintenance:	service menü

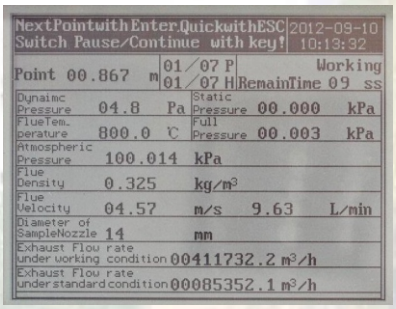
Main menu

Procedure of measurement

1. Measurement of absolute humidity in the exhaust gas with humidity probe
2. Measurement of the exhaust gas velocity with the combined probe for differential pressure p, gas velocity and temperature
3. Selection of the dust probe as result of the velocity measurement
4. Connection of dust probe with tube and insertion of the filter element
5. Start of measurement by pressing the button and wait for the end of measurement - the exhaust and sample parameters are automatically saved
6. Enter the dust mass determined after the the filter has been weighed.
7. The result of the dust sampling is automatically calculated - output of values e.g. By means of integrated printer respectively via interface.



Ex.: enter channel dimension: the device shows the measuring points in the cross-section.



Ex.: display during measurement : trend diagram of the chosen system parameter

Measuring variables

Dynamic pressure:	0 ... 2.000 Pa
Static pressure:	-30 ... 30 mbar
Baro pressure:	70 ... 110 kPa
Flow (sampling):	5 ... 60 l/min
Temperature (before flow meter):	-30 ... 150 °C
Temperature (exhaust gas)	0 ... 400 °C
Humidity:	0 ... 40 Vol%
Response time:	< 8 sec

General technical data

Case:	portable suitcase (control unit integrated)
Media temperature:	max. 400 °C
Ambient temperature:	-20 ... +50 °C
Dew point difference:	min. +5 K
Power supply:	230 VAC / 50 Hz, 200 W