DURAG GROUP

HM-1400 TRX 2
Total mercury analyzer

Continuous mercury analysis in flue or process gas

- QAL1 certified according to EN 15267
- Measuring principle allows specification
- Automatic reference point check with internal reference gas generator

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FEATURES

- Continuous mercury analysis
- Smallest certified measuring range 0 ...15 µg/m³*
- Simple design
- Process control of mercury mitigation measures with speciation option
- Low instrument air consumption
- Internal reference gas generator for automatic reference point measurement
- Maintenance: Fast system cooling and heating

BENEFITS

- Stable measured values and maximum of daily average values
- Suitable for daily average values <10 µg/m³
- Easy operation
- Cost savings due to process optimization
- Reduced operational cost
- High availability of the device
- Efficient service as a result of reduced maintenance requirements

TECHNICAL DATA

Analyzer	
Measuring values	Total mercury concentration (Hg_{total}) or elemental mercury concentration (Hg^0)
Measuring principle	Atomic absorption spectroscopy
Light source, spectral range	Mercury lamp, 253.7 nm
Measuring ranges	0 ... 10 µg/m³, 0 ... 400 µg/m³, 0 ... 3,000 µg/m³ (depending on design)
Certified measuring ranges	0 ... 15 µg/m³*, 0 ... 45 µg/m³, 0 ... 75 µg/m³
Certificates	CE, QAL1 EN 15267-1, EN 15267-2, EN 15267-3, EN 14181, MCERTS
Operating conditions	In duct: • Temperature: Up to +300 °C • Relative humidity: 0 ... 100% • Inner duct pressure (gauge): –50 ... +20 hPa
Inner duct diameter	>0.5 m
Ambient temperature	0 ... +50 °C
Automatic control functions	Leak test, zero point measurement, reference point measurement with $HgCl_2$ reference gas
Conversion	Thermocatalytic reduction at 300 °C, two chambers per reactor with manual or automatic switch, cartridge exchange during operation
Interface	• Analog output: 3x 4 ... 20 mA, maximum 1,000 Ω, configurable parameters • Digital input: 8x, configurable parameters • Digital output: 9x relay contact, NO, maximum 60 V⎓, 25 V~, 0.3 A, configurable parameters
Operation	Display and operating unit in front door, remote access for DURAG service by TCP/IP

Instrument air supply	Only in operation with dilution or for internal drift check with reference gas ($HgCl_2$) • Dilution: 3 ... 13 bar, maximum 0.1 m³/h • Internal drift check**: 3 ... 8 bar, maximum 0.5 m³/h (corresponds to <1 m³/week)
Operating voltage	230/400 V 3x 25 A, N, PE, 50 Hz, maximum 10 kVA
Energy demand at continuous operation	0.5 kWh/h (corresponds to 4,500 kWh p. a.)
IP class (IEC 60529)	IP54
Material	Sheet steel cabinet, painted
Dimensions (h x w x d)	1,700 x 800 x 500 mm
Weight	Approx. 220 ... 250 kg

Sampling system	
Components	• Sampling probe • Sampling tube • Heated sample gas line
Sampling probe	Heated with integrated temperature sensor, regulated and supplied by analyzer
Sampling tube	Heated, length 600, 1,000 or 1,500 mm, regulated and supplied by analyzer
Sample gas line	• Temperature-regulated, minimum 185 °C (365 °F), IP65 • Operating voltage: 230 V L, N, PE, 50 ... 60 Hz • Energy demand: 0.095 kWh/m • Maximum length: 40 m (supplied by analyzer)
Process connection	Flange DN65 PN6

* For large combustion plants and waste incinerators
** Discontinuous operation

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